Memphis Striving Readers Project

Evaluation Report, Year 4

March 2011

A report prepared for the

Striving Readers Program

United States Department of Education

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Acknowledgements

This study is the result of strong partnerships forged between staff members at Memphis City Schools (MCS), the University of Memphis, and Research for Better Schools (RBS) and its associates, RMC and Edvantia. The authors represent a small fraction of individuals who contributed to the study's design, implementation, and analyses. The specific contributions of each author are as follows: Kelly Feighan, for her leadership in conducting, analyzing, and writing up the research related to implementation of the whole-school intervention and logistical coordination of project-wide collection of data; Debra Coffey, for her leadership in conducting, analyzing, and writing up research related to implementation of the targeted intervention and for skillful editing of this report; Allen Schenck, for his leadership in developing the research design and analytic models used to assess impact for both interventions; Ning Rui, for developing the quasi-experimental analytic model to test the assessment of the whole-school intervention; and Jill Feldman, for her leadership as principal investigator of the research team.

In particular, the authors wish to thank Dr. Elizabeth Heeren, Principal Investigator of the Memphis Striving Readers Project at MCS, for her invaluable guidance in all aspects of the implementation evaluations. Others at MCS whom we wish to thank include Tracey Wilson, who prepared MCS data sets for analyses, coordinated the administration of the Iowa Test of Basic Skills, and helped ensure the integrity of the randomized student assignment; and Coronica Hall, Candice Pollan, Jocquell Rodgers, Deatric Sanders, and Regina Washington, who provided data that were critical to analyses of the implementation and impact of the whole-school intervention. We wish to also thank the Striving Readers school principals, course instructors, and participating teachers, all of whom provided information that is essential to our study.

We thank the chief architect of MCLA, Robert Cooter, formerly of the University of Memphis and now at Bellarmine University, for his genuine interest in improving adolescent literacy and his unwavering support and enthusiasm for the evaluation of the whole-school intervention. We thank others at the University of Memphis, including Helen Perkins, co-Principal Investigator of MSRP, for her insights and feedback about instruments and other materials used to collect implementation data, and Kathy Cooter for her ongoing contributions. Additionally, we thank Ric Potts of Christian Brothers University, formerly of MCS and Principal Investigator of MSRP, for his continued support and commitment.

We wish to acknowledge RBS staff members who, in Year 4 of this study, conducted classroom observations, collected survey data, and/or assisted with the analyses: Eric Kucharik, Elena Kirtcheva, Pilar Bartlett, Lindsay Wilhelmi, and Toby Katz. We'd also like to thank the team of associates at Edvantia, led by Kristine Chadwick, who conducted observations and collected additional data.

Finally, the authors of this report wish to acknowledge the time and efforts of our technical working group members who convened monthly to guide the study's analyses. In addition to colleagues listed above who participated in this working group, we wish to thank Keith Kershner of RBS and Jim Craig at the School of Education at Virginia Tech. Cris Price and Barbara Goodson from Abt, our technical assistance provider, have also been exceedingly helpful in shaping our analyses and ensuring that we use thoughtful, rigorous analyses and produce work that consistently meets high standards.

The Authors
June 2011

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I. Executive Summary

This report presents the results from an evaluation of the fourth year of the Memphis Striving Readers Project (MSRP) conducted by Research for Better Schools (RBS). MSRP, funded for five years by the United States Department of Education, comprises two interventions aimed at improving adolescent literacy and the quality of literacy instruction across the curriculum. Eight Memphis City Schools (MCS) middle schools were chosen for inclusion in the study.

The first intervention component, Scholastic's *READ 180* program (Enterprise Edition), has been implemented for four years in the MSRP schools. The 90-minute daily model includes instructional materials to be implemented as four 20-minute rotations in which students use the software program to build skills, engage in teacher-directed whole- and small-group instruction, read independently, and conclude with a 10-minute wrap-up. Students in the sixth through eighth grades who demonstrated the strongest need for reading support—i.e., who performed in the bottom quartile on the reading/language arts portion of a prior Tennessee Comprehensive Assessment Program (TCAP) test —were randomly selected to participate in the supplemental program or to serve as control group students. During Year 4, there were 809 students in the treatment (400) and control (409) groups.

The second intervention component, the Memphis Content Literacy Academy (MCLA), is a whole-school professional development (PD) program designed by faculty, formerly at the University of Memphis, now at Bellarmine University, in collaboration with MCS staff. The overarching goal of MCLA is to improve literacy integration across the content areas through an intensive two-year PD program designed to develop middle school teachers' use of literacy strategies to improve achievement in reading and in core content area subjects (defined as English language arts, mathematics, science and social studies). In addition to PD classes for teachers, MCLA included a course for school leaders, on-site coaching to support implementation, and an investment of $40,000 per school in supplemental instructional materials to be included in a Curriculum Resource Center (CRC).

Researchers collected information about the implementation and impact of the two interventions using a variety of methods, including surveying, observing, and interviewing participating teachers as well as reviewing program documents and student scores on the Tennessee Comprehensive Assessment Program (TCAP) and Iowa Tests of Basic Skills (ITBS). A summary of key findings related to the implementation and impact of each intervention are presented next.

READ 180 *Implementation*

Analyses of data related to *READ 180* implementation indicate implementation varies widely across the eight Striving Readers schools' sixteen classrooms. However, implementation has improved each year. Percentages of classrooms that were rated as adequate with regard to overall implementation were lowest in Year 1 (slightly above 40%) and in Year 4 reached levels of more than 80 percent. Direct comparisons within the 12 classrooms that were unaffected by teacher attrition from Year 3 to Year 4 reveal the following:

- improved average Year 4 ratings, compared with average Year 3 ratings, of all components included in calculating fidelity (professional development, observations, and Scholastic Achievement Manager data) among 75 percent of classrooms
- statistically significant *school-level* improvement regarding the number of *READ 180* sessions implemented per week, rising from 2.217 sessions in Year 3 to 2.752 in Year 4 (although still below the recommended minimum of at least 3 sessions weekly)[1]
- Significant *student-level* improvements in Year 4 compared to Year 3,including:
  - similar increases in the number of weekly sessions that were implemented
  - an average increase of more than 545 minutes using the software, reflecting reduced levels of technology-related problems

READ 180 *Impact*

A summary of *READ 180* findings across the project's four years follows:

- No significant one-year impacts of participation in *READ 180* were detected in Years 1, 2, or 4.
- There was one small but significant one-year impact detected in Year 3 on sixth-grade students' scores on the TCAP Reading/Language Arts test.
- Analyses of interactions between the impacts of *READ 180* and the whole-school intervention in Years 1 and 2 yielded no clearly interpretable patterns suggesting differences in the impact of *READ 180* between MCLA treatment and control schools.
- There were no significant two-year impacts of *READ 180* Years 2, 3, or 4.
- None of the analyses of combined ITT samples conducted in Year 4 yielded significant one- or two-year impacts.
- The lack of findings related to Year 4 one- and two-year impacts was confirmed using a propensity score matching technique.

MCLA Implementation

Year 4 results indicate low to medium levels of MCLA implementation at each of the four Striving Readers schools. Implementation ratings were composed of the following components: levels of participation in MCLA, a coaching dosage score, a principal involvement rating, a use of materials score, and a teacher implementation score. In addition, RBS designed and facilitated a coaching retreat during which ratings of dimensions of teachers' practice were assigned by coaches. Ratings were assigned based on descriptions of components explicated in the MCLA Innovation Configuration (IC) map. A cluster analysis showed that coaches rated over half (53%) of the 83 teachers as low-fidelity implementers, 26.5 percent as medium-fidelity implementers, and 20.5 percent as high-fidelity implementers. Findings suggest that the IC Map

[1] Although the number of sessions per week remained below the minimum of three recommended by Scholastic, the relatively large number of minutes per session (18.48 minutes) indicates that students, on average, used the software for more than the minimum amount of time recommended over the course of the school year.

is a sufficiently sensitive framework to support empirical fidelity studies. Below are other findings related to Year 4 implementation:

- The amount of time respondents spent in staff development during Year 4 differed by cohort. Teachers who attended MCLA during the first two years (Cohort 1) reported significantly lower levels of professional development related to: (1) new teaching methods; (2) technology integration; (3) student assessment; (4) addressing English Language Learners; and (5) literacy integration compared to Cohort 2 teachers (those who participated in MCLA in Years 3 and 4).
- In Year 4, 42.5 hours of MCLA course-related professional development were offered. The remaining 47.5 hours (not documented) were to be completed through on-site work with coaches. Results show that, with the exception of science teachers, attendance by Cohort 2 participants was reasonably high. Other findings related to MCLA course-related participation are as follows:
  - The percentage of eligible teachers who enrolled in MCLA ranged from 44 percent to 72.7 percent in the fall of Year 4 and dropped to between 24 percent and 60 percent by the spring.
  - 82.7 percent of all enrolled teachers completed *both* fall and spring semesters.
- According to coaching logs, 36.2 percent of all Year 4 MCLA participants received high levels of coaching support.
- Across time, the percentage of respondents who reported meeting with a literacy coach in the prior seven days increased.
- Principals reported feeling encouraged to conduct school walkthroughs with a focus on literacy, which they suggested strengthened their observational techniques and sparked discussions with teachers about instructional approaches. Despite increasing over time, only a quarter of teachers reported receiving administrator feedback, and this was the least frequently reported activity.
- Overall, ratings of teachers' Curriculum Resource Center use were low.
- Significant increases were detected across time in percentages of teachers who reported formally assessing strategy use, meeting with a literacy coach, and receiving administrator feedback regarding literacy instruction.
- Observed use of vocabulary, fluency, and comprehension strategies during lessons was relatively even and ranged from 24 percent to 29 percent of strategies observed.

MCLA Impact

The experimental research design in Years 1 and 2 was a randomized matched-pairs design, with MCLA implemented in four of the eight schools. After the second year, MCLA ended in the experimental treatment schools, was revised to reflect lessons learned in Years 1 and 2, and moved to the four schools that initially served as control schools. Thus, the experimental phase of MCLA ended at the end of Year 2. Given that Year 4 represents completion of the second and final round of implementing MCLA, ordinary least squares regression (OLS) and a quasi-

experimental simulation analysis were carried out in an attempt to estimate improved achievement among students in the Cohort 2 schools that might be attributable to the whole-school intervention. Leveraging the design strength of using each school as its own "control," achievement of students in the Cohort 2 schools at the end of Year 2 was compared to performance levels of students enrolled in these same schools at the end of Year 4 to estimate program effects. Main findings suggest the following:

- The estimated impact of MCLA using OLS was not significant in any grade except eighth.
  - For eighth-grade students, Year 4 results were significantly better than in Year 2 for ITBS Total Reading and Vocabulary scores, with effect sizes approaching 0.20.
  - When the eighth-grade and seventh-grade students were combined, effect sizes were reduced and effects were not significant, despite the increased sample size.
- The estimated impact of MCLA using the simulation approach indicated findings similar to those produced using OLS. The significance level and magnitude of effects on eighth-grade students' ITBS Vocabulary and Total Reading scores are very close to the estimates derived from the OLS regression analyses. Specifically, two years of MCLA had overall treatment effects of
  - .24 standard deviations on eighth-grade students' ITBS Vocabulary scores
  - .17 standard deviations on the eighth-grade students' ITBS Total Reading scores
  - .09 standard deviations on the combined seventh- and eighth-grade students' ITBS Vocabulary scores.
- The two approaches produced consistent estimates of the magnitude of effects MCLA on seventh- and eighth-grade students' vocabulary scores, although the estimated effect using OLS is not statistically significant.

MSRP: Year 5

This Year 4 report represents the final full report of the Memphis Striving Readers Project. During Year 5 (2010–2011), researchers at RBS and several project partners at Memphis City Schools and the University of Memphis began and will continue to focus on conducting additional analyses of data gathered and disseminating the findings of the project in a variety of media. Appendix ES comprises a list of these analysis and dissemination efforts.

II. Introduction and Study Background

Introduction

This report presents the results from an evaluation of the fourth year of the Memphis Striving Readers Project (MSRP) conducted by Research for Better Schools (RBS). MSRP, funded for five years by the United States Department of Education, comprises two interventions aimed at improving adolescent literacy and the quality of literacy instruction across the curriculum. Eight Memphis City Schools (MCS) middle schools were chosen for inclusion in the study. Table 1 summarizes the enrollment figures by schools for the four years of the MSRP and shows that over time, enrollment at the eight schools has decreased from 5,785 in Year 1 to 4,009 in Year 4.

Table II-1: Student Enrollments in Schools Participating in the Striving Readers Study

Memphis Middle Schools Participating in MSRP	Enrollment in 2006–2007	Enrollment in 2007–2008	Enrollment in 2008–2009	Enrollment in 2009–2010
1	856	724	774	614
2	997	1,034	1,021	989
3	413	374	344	310
4	635	520	462	387
5	858	856	968	882
6	640	603	539	406
7	471	405	341	352
8	915	759	713	683
Total	5,785	5,275	5,162	4,009

Data sources:http://edu.reportcard.state.tn.us/pls/apex/f?p=200:1:3167232149886940 (Year 4) and http://www.memphis-schools.k12.tn.us/admin/communications/directoryofschools.html (Years 1–3)
Note: A different data source was used in Year 4 because enrollment data were not available on the MCS web site as of the writing of this report.

The first intervention component, Scholastic's *READ 180* program, has been implemented for four years in the MSRP schools. Students in the sixth through eighth grades who demonstrated the strongest need for reading support—i.e., performed in the bottom quartile on the reading/language arts portion of a prior Tennessee Comprehensive Assessment Program (TCAP)—were randomly selected to participate in the supplemental program. The *READ 180* intervention served 707 students in the eight schools in Year 1 (2006–2007), and 289 new sixth-grade students were assigned to the intervention in Year 2 (2007–2008). In Year 3, 274 new sixth-grade students were assigned to the *READ 180* intervention, and in Year 4, 238 new sixth-grade students were assigned.

The second intervention component, the Memphis Content Literacy Academy (MCLA), is a whole-school professional development program. The experimental research design in Years 1 and 2 was a randomized matched-pairs design, with MCLA implemented in four of the eight schools. After the second year, MCLA ended in the experimental treatment schools and moved to the four schools that initially served as control schools. Operations in Years 3 and 4 thus represent the entirety of the whole-school intervention at the former control schools. The program, developed by University of Memphis and MCS staff, was originally designed for

teachers in the English/language arts (ELA), social studies, mathematics, or science content areas or special education teachers, but the program was expanded in Years 3 and 4 to include any full-time staff member who provided instruction to students (e.g., writing, foreign language, and exploratory teachers, guidance counselors, and instructional facilitators). In Year 4, a total of 156 full-time school staff members were eligible to participate in MCLA.

Background Context

The United States Department of Education awarded MCS a five-year Striving Readers grant to help address the city's significant educational needs. According to the MCS web site,[2] MCS serves more than 105,000 students and ranks as the nation's twenty-third–largest K-12 school district, although total enrollment has dropped over the past several years. Over 95 percent of the 196 MCS schools are Title I schools, and 71 percent of students qualify for free or reduced-price meals (The Urban Child Institute, 2008). Approximately 86 percent of MCS students are African American, 8 percent are white, and 6 percent are other races and/or ethnicities (MCS, 2009). The number of English Language Learners doubled between the 2000–2001 school year and the 2006–2007 school year, although numbers of students in this category remained relatively low among Striving Readers schools (MCS, 2009). Other data show that 71 percent of students in the sixth through eighth grades scored below the 50th percentile on the reading/language arts portion of TCAP (Potts, Perkins, Heeren, Harris, & Feldman, 2008). It appears that no progress has been made in raising students' scores on the reading/language arts portion of the TCAP because the same percentage of students scored below proficient in 2008 as in 2005 (The Urban Child Institute, 2009). Research has shown that approximately 66.9 percent of MCS students graduate from high school within four years (The Urban Child Institute, 2009; Heart, 2008).

Theoretical Rationale for and Description of the Targeted Intervention Model

Description of the Targeted Intervention

READ 180 is a commercially available reading intervention program from Scholastic that targets struggling readers in the fourth through twelfth grades. The Enterprise Edition is the most recent version, and it combines a software program, teacher-directed instruction using a textbook and similar resources, and independent or modeled reading (i.e., reading while listening to audiobooks). Close adherence to the structure of the program requires 90 minutes divided into four 20-minute and one 10-minute blocks. The first 20 minutes and a final 10-minute wrap-up involve whole-group instruction. The other three 20-minute blocks require students to rotate between teacher-led small-group instruction, individual use of the proprietary *READ 180* software, and reading leveled fiction and nonfiction texts provided with the program.

During Years 1, through 4, there were two or three teachers teaching *READ 180* at each of the eight MSRP schools (19 in each of Years 1 through 3; 16 in Year 4). Almost all of the

[2] http://www.mcsk12.net/facts_about_mcs.asp

teachers were licensed, experienced ELA teachers.[3] Several schools offered *READ 180* prior to the Striving Readers project, and in those instances, teachers with previous *READ 180* experience were assigned to teach *READ 180* as part of the targeted intervention. There were no other criteria for assignment.

Students Targeted by the Intervention

MCS identified a pool of struggling readers at the eight MSRP schools and defined students who scored in the lowest quartile on the Reading/Language Arts section of the TCAP exam as eligible for assignment to *READ 180*. In fall of 2006, identified students were randomly assigned to the control or treatment condition, and in fall 2007, treatment students who were still enrolled in MSRP schools (that is, students who moved from sixth to seventh grade or seventh to eighth grade) were enrolled for a second year in *READ 180.*[4]Also, at the beginning of the 2007, 2008, and 2009 school years, incoming sixth-grade students who were identified as struggling readers were randomly assigned to the control or experimental condition, and seventh-grade treatment students who remained in MSRP schools were again enrolled in *READ 180* for a second year. Because *READ 180* is considered a two-year intervention by MCS and this study's design, eighth-grade students, whether they were originally assigned to the treatment or control condition, are not included in the Year 4 analyses.

Students assigned to *READ 180* experience the intervention in addition to their regular language arts classes and other courses related to language arts (e.g., reading, creative writing) that are offered at their schools. Control students experience the same language arts classes, reading classes, and/or other classes related to language arts that would be offered in their schools if MSRP did not exist.

Logic Model for Targeted Intervention

The logic model for the targeted intervention, as published in Scholastic's *READ 180 Enterprise Edition Research Protocol and Tools* (2007), appears as Figure III-2. Graphics illustrating the instructional model and detailing the rotation activities appear as Figures III-3aand III-3b.

Professional Development Model Components

In all four years, new *READ 180* teachers were expected to attend two all-day training sessions (experienced teachers were expected to attend at least one). Additionally, the district hosted after-school, two-hour "networking meetings" (four during Years 1, 3, and 4, and seven during Year 2) at which Scholastic representatives and MCS staff members taught teachers how to use or improve different components of *READ 180,* such as using the data generated by the *READ 180* software to differentiate instruction or using supplemental *READ 180* teaching materials for strategic vocabulary instruction. During Year 2, MCS encouraged teachers to complete Scholastic's "Best Practices for Reading Intervention," a seven-part online course

[3] One provisionally licensed teacher with one previous year of teaching experience taught *READ 180* during Year 2
[4] There was some attrition and a few instances in which students were opted out of the intervention; these are detailed in the "Sample Selection" section of Part IV.

designed for *READ 180* classroom teachers (in Year 2, MCS provided a small monetary stipend to teachers who completed the online course). In Years 2 through 4, MCS staff members conducted observations of *READ 180* teachers and provided feedback to help improve the teaching of *READ 180*; in Years 2 and 3, Scholastic representatives conducted at least one classroom observation per teacher and provided feedback to the teacher and to MCS district staff.[5] During Year 3, MCS began strongly encouraging school administrators to attend a half-day *READ 180* training presented by Scholastic and designed for school leaders and administrators, and leaders were again encouraged to attend this training in Year 4,

Figure II-1: Elements of *READ 180* Professional Development, Years 1 through 4

Element	Year 1	Year 2	Year 3	Year 4
All-day training* (seven hours)	2 / 1	2 / 1	2 / 1	2 / 1
Networking sessions (two hours)	4	7	4	4
Online course	available	incentivized	not offered	not offered
Formative observation and feedback	not offered	at least 1 per year	at least 1 per year	at least 1 per year
Administrator training (four hours)	not offered	not offered	1	1

**New* READ 180 *teachers were required to attend two days of training; teachers who had experience teaching* READ 180 *were required to attend one day of training.*

Classroom Model Components

The planned instructional model was to follow the published and recommended *READ 180* model. According to the *Leadership Implementation Guide: Supporting* READ 180 *in Your District* (2005) published by Scholastic, the recommended class size for *READ 180* is 21 or fewer students (MCS strove for these classes to include 18 or fewer students). Scholastic recommends that students be divided into three homogenous groups according to diagnostic assessments and regrouped as indicated by subsequent assessments. (According to Scholastic's *READ 180* training materials, Scholastic allows for alternate grouping strategies, such as purposefully creating heterogeneous-ability groups or considering behavioral issues to guide grouping.) Students are to be in *READ 180* class for 90 minutes during every school day. Figures III-3a and III-3b detail Scholastic's recommendation for use of instructional time and provide some details about the targeted areas of reading and instructional approaches.

READ 180 software provides instruction in decoding and word recognition, spelling, fluency, vocabulary, and comprehension. Whole-group and small-group instruction include a variety of instructional approaches, including fluency exercises, question stems, use of graphic organizers, activation of prior knowledge, and cooperative group work (among others). The Scholastic Achievement Manager (SAM) automatically generates student-level data based on work students have done and assessments they have completed using the *READ 180* software.

[5] Scholastic provides detailed descriptions of the all-day implementation training sessions and the online courses at, respectively, http://teacher.scholastic.com/products/read180/prof/implement_train.htm and http://teacher.scholastic.com/products/read180/prof/bestpractices.htm

All students in *READ 180* classes are provided with a *flexBook*,[6] the course textbook. All *READ 180* classrooms have libraries with a variety of fiction and nonfiction leveled texts provided for the modeled and independent reading rotation of *READ 180*. During the *READ 180* software rotation, each student has individual access to a computer to complete the exercises. Teachers use their dedicated computers for recordkeeping and for tracking student progress through use of the instructional software.

READ 180 includes a number of assessment tools in its software. Regular reports of student progress through the instructional software are available to teachers through the networked computers using SAM and the Scholastic Management Suite (SMS) software. Teachers are expected to administer the Scholastic Reading Inventory (SRI) at least three times per school year; MCS established date "windows" within which the SRIs should be administered. Additionally, the teachers are expected to use the data from SAM and SMS, the SRIs, and other assessments deemed appropriate by the teacher to determine whether lessons are working, to differentiate instruction, and to regroup the students.

[6] The *rBook* and the *flexBook* are two versions of the same text, with similar lessons, exercises, strategies, etc. The versions have different reading selections so students who are in *READ 180* for two years do not experience identical readings over those two years. MCS alternates use of these texts each year.

Figure II-2: Logic Model of Targeted Intervention

The *READ 180* Enterprise Edition Logic Model

Resources/Impacts	Ongoing Teaching/ Learning Activities	Short-Term Outcomes	Long-Term Outcomes
1) Teacher training and professional development* 2) Scholastic Professional Development for administrators and technical directors 3) *rBook* or *flexBook* Teacher's Edition and *rBook* or *flexBook* student work text 4) Networked computers with microphones and headsets, teacher workstation, and printer 5) CD players with headsets 6) TV with DVD player 7) *READ 180* EE Topic Software, Audiobooks, Paperbacks, and Anchor Videos 8) Classroom space adequate for *READ 180* instruction 9) Scholastic Achievement Manager (SAM)	A daily 90-minute instructional block 20-minutes Whole-Group Instruction to start the class Small-group rotations in which students are divided into 3 groups and spend 20 minutes each rotating through: •Small-Group Instruction •Modeled and Independent Reading •Use of *READ 180* EE Topic Software Regular use by teachers of *READ 180* instructional strategies and materials contained in *READ 180* program guides, which include (but are not limited to) independent reading of leveled texts, use of graphic organizers, and specific teaching of vocabulary. 10 minutes of Whole-Group Wrap-Up to conclude the class Enrollment of 15–18 students per class *[or up to 21]* Enrollment lasting the entire school year *[for two years]* Instruction that follows *rBook* (or *flexBook)* scope and sequence Regular use, by teachers and administrators, of diagnostic tests (SRI) and the Scholastic Management Suite software for continuous assessment, placement, and monitoring	Improved classroom behavior and school attendance and decreased disciplinary incidents Increased motivation and engagement in reading Increased reading proficiency as reflected in SRI scores and other indicators monitored by SAM	Improved state and local assessment results *[at least 50% of the READ 180 program students will score proficient on TCAP reading, language arts, and other content area subtests, and those students will make a mean gain on reading and other content area subtests of at least 5–10 NCEs over control students]* Improved learning in all content areas

Contextual effects such as the characteristics of the school district, other instructional programs in use, and external events may also influence outcomes

 Text in blue italics is specific to MSRP. Blue underlined text was added for clarity by RBS.

*The only differences in the targeted intervention between years 1 and 4 were related to professional development and are described in Section III.

Figure II-3a: *READ 180* Instructional Model

Figure II-3b: Description of *READ 180* Rotation Activities

	Small-Group Rotations			
Whole-Group Direct Instruction	Small-Group Direct Instruction	*READ 180* Software	Modeled and Independent Reading	Whole-Group Wrap-Up
Using the *READ 180* instructional materials, the teacher begins the day by providing systematic instruction in reading, writing, and vocabulary to the whole class.	Using the *rBook* and *Resources for Differentiated Instruction*, the teacher works closely with students so that individual needs can be met.	Students use the software independently, providing them with intensive, individualized skills practice.	Students build reading comprehension skills through modeled and independent reading of the *READ 180* paperbacks and audiobooks.	The session ends with 10 more minutes of whole-group instruction.

The above graphic and table were copied on November 8, 2007, from http://teacher.scholastic.com/products/read180/overview/instrmodel.htm#small-group

Theoretical Rationale for and Description of Whole-School Intervention Model

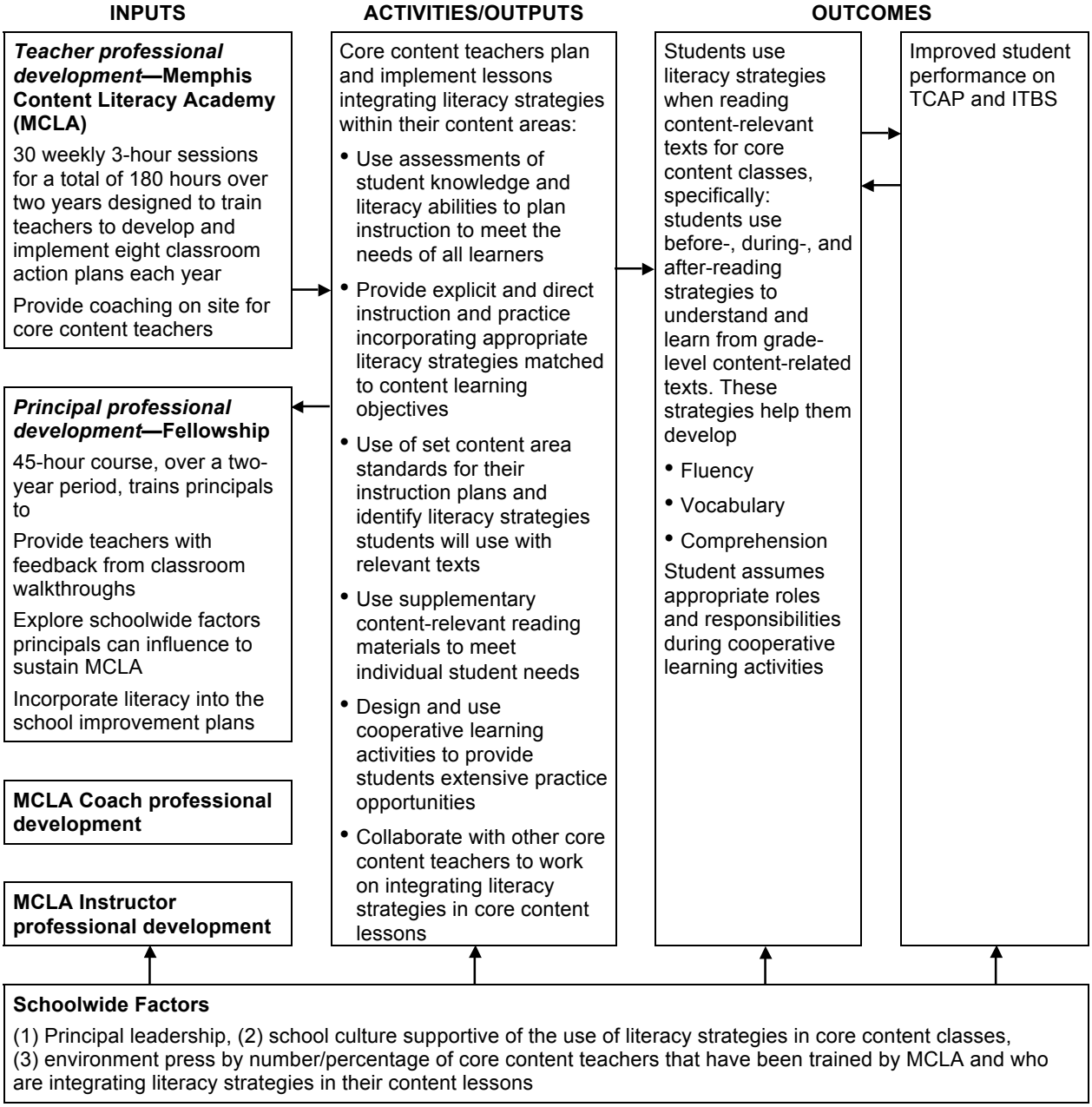
MCLA is a whole-school intervention designed to improve teaching and learning through intensive professional development for teachers, onsite literacy coaching assistance, a seminar for principals and other school leaders, and classroom use of grant-funded curricular resources. In the first two years of the Striving Readers grant, four of the eight participating middle schools (hereafter referred to as Cohort 1 school") were randomly assigned to receive the whole-school intervention, while four schools serving as research controls (hereafter designated as the Cohort 2 school") did not participate in MCLA. In Year 3, the MCLA intervention moved from the Cohort 1 to the Cohort 2 schools, and developers invited all Cohort 2 full-time staff members with teaching responsibilities to participate in two years of professional development that would focus on infusing literacy into the core academic content areas English/Language Arts (ELA), mathematics, science, and social studies. Special education and" exploratory" teachers (e.g., those teaching art, music, or computers), school counselors, librarians, and others who provide instruction to groups of students were also encouraged to join MCLA in Years 3 and 4. A total of 144 full-time school staff members at the four Cohort 2 schools were eligible to participate in MCLA in fall 2008, and 156 were eligible in fall 2009.

Developers hypothesized that greater and more effective integration of literacy strategies by teachers would lead to student performance improvements in reading and the core academic content areas. The intervention was designed so that teachers with no prior knowledge of or experience with literacy integration had opportunities to practice strategies in the MCLA course and then, with coaching support, gradually assume responsibility for helping their students learn how and when to use the techniques on their own. Two tools designed for the evaluation elaborate on this theory of action: the first (Figure 4) is a logic model of intervention activities, outputs, and anticipated outcomes; the second (included in Appendix A) is a significantly more comprehensive and in-depth rendering of the intervention, an "Innovation Configuration (IC) Map," created by a partnership of evaluators, program developers, and project implementation leaders and staff.

As Figure 4 shows, developers originally planned to offer content-related materials on literacy integration in the MCLA evening course and, in each school, a $40,000 curriculum resource center (CRC) stocked with content-rich, multi-leveled materials and an onsite literacy coach to assist and support teachers with strategy implementation. Developers anticipated that teachers would, as a result of participation, gain a deeper understanding of the need for literacy integration into the content areas and use a series of research-based literacy integration skills with increased frequency and confidence.

Developers also hoped that the intervention would create a sharpened schoolwide focus on adolescent literacy as teachers shared techniques and experiences and assessed the program's impact on their students. Ultimately, developers anticipated that the transformed literacy-saturated middle school environment would boost student achievement first in reading and then in the core content-area classes.

FigureII-4: Logic Model of the Memphis Striving Readers Whole-School Intervention



Notes: The logic model describes the two-year intervention as planned. Details about the intervention as implemented in Year 4 are presented in section V (e.g., developers provided 42.5 hours of MCLA course-related professional development in Year 4)

The Innovation Configuration Map

During Years 1, 2, and 3 of MSRP, the team of university, school district, and evaluation partners developed an IC Map (Hall and Hord, 2006) that explicated the intervention's main components. The IC Map provides operational definitions of program components at various levels of implementation and can be used to reflect on teacher practice, monitor classroom implementation, identify the areas of a program in most need of attention, and develop

evaluation instruments. It was finalized and piloted with literacy coaches in Year 3 and administered in Year 4; ratings from the IC Map are currently being correlated with student outcomes to empirically establish which MCLA components, if any, are most strongly associated with targeted improvements.

More specifically, in spring 2010 RBS evaluators engaged the MCLA literacy coaches in rating teachers' level of implementation fidelity with respect to specific classroom practices. The teacher-related practices rated by coaches during a one-and-a-half-day retreat designed and facilitated by RBS included the following:

- introducing literacy strategies to students
- modeling how to use the strategies
- providing instruction that is explicit and direct
- differentiating instruction
- enabling students to use strategies independently
- revisiting strategies consistently during lessons

Throughout the school year, coaches collected evidence about teacher implementation such as observation notes, student work products, and class handouts. Before using the IC Map to rate fidelity implementing the specific components, evaluators asked the coaches to assign global ratings (i.e., low, medium, high) for individual teachers based on their overall impression of the teachers' highest levels of implementing a composite comprised of all five components. Coaches drew upon their professional experience with teachers and data sources in each teacher's portfolio and issued a separate rating for each component. A cluster analysis conducted by RBS showed significant agreement between coaches' initial global ratings assigned to teachers and computer-generated clusters based on specific ratings of each component. Clusters indicated that the IC Map was useful in describing observable aspects of teaching and learning and sufficiently sensitive to distinguish between various levels of implementation fidelity. (Additional details and findings from the Year 4 implementation fidelity rating activity involving coaches are presented in section IV of this report.)

Professional Development Model Components

The MCLA teacher and principal course syllabi, coach job descriptions, and an inventory of instructional materials together provide the best description of the intervention's four main components. The teacher course was designed to meet weekly for three hours over two years, for a total of 180 hours of professional development. According to the original proposal, planners had hoped to enroll 80 percent of approximately 120 eligible content-area teachers who would select one of four evening content courses (mathematics, science, ELA, and social studies) according to their primary teaching assignment. Table II-2 provides details about the PD model as planned and as implemented in Years 1 through 4.

To ensure consistency across classes, developers prepared templates for instructors who were highly qualified reading and content-area specialists to follow when teaching the course; these templates were similar structurally across the content areas. Developers also provided

discipline-specific materials for teachers. The developers' goal was for each participant to see strategies modeled during the evening course and then, with a coach's guidance, practice using those strategies in his or her own classroom. By issuing approximately ten "classroom action plan" (CAP) course assignments over two semesters, designers hoped that teachers would be compelled to work with coaches in school on a weekly basis.

Developers instituted monthly Principal Fellowship meetings to apprise school principals of MCLA activities and to provide them with opportunities to brainstorm possible solutions to commonly experienced problems. In Year 4, developers invited building principals, assistant principals, and instructional facilitators as a team to attend four sessions between September 2009 and February 2010; these teams were created and invited in an effort to mitigate erosion of support resulting from principal turnover and/or ongoing shifts in district-level priorities.

Assistance provided by onsite literacy coaches is the third component of MCLA. In Year 4, the six literacy coaches—individuals with at least five years of teaching experience, a Master's degree, and strong literacy background—were responsible for observing, monitoring, and assisting teachers with meeting the weekly objectives of the CAPs; monitoring *READ 180* program delivery; visiting with principals to keep them informed of teachers' needs; and maintaining the CRC. The coaches were also expected to participate in a wide range of professional development activities provided by MCLA developers in the areas of mentorship, urban education, adolescent literacy, and in professional development related to *READ 180*.

The CRC is the fourth and final component of the MCLA professional development program. Housed in each of the participating schools, each CRC contains leveled books, kits, reference books, and other materials to assist teachers with integrating literacy into their content area classes. Evening course instructors and onsite literacy coaches promoted the use of CRC materials, which remained in the schools when MCLA ended.

Classroom Instruction Model Components

Prior to implementation, MCLA designers identified twelve key instructional strategies as the primary foci of the evening course, including the use of graphic organizers, comprehension monitoring techniques, question generation, repeated oral reading, preteaching vocabulary, and direct, explicit instruction. Year 3 and Year 4 course assignments required teachers to use strategies aimed at improving students' vocabulary, fluency, and comprehension and to meet with coaches to plan lessons designed to bolster strategy implementation. The MCLA course instructional model was designed to provide opportunities for teachers to practice modeling the literacy strategies among colleagues as part of training before implementing them with their students. Participants were then expected to model the strategies for their students and help the students adopt and use the strategies with increasing independence. Developers had hoped that teachers would integrate the strategies into existing class activities rather than view them as separate and distinctive lessons. Although developers did not plan a formal system for using student data to inform decision-making in MCLA, they built into the CAP assignments an informal student assessment procedure.

Changes Made to the Professional Development Model between Cohorts 1 and 2

MCLA was administered to Cohort 1 teachers during the first two years, while Cohort 2 teachers served as a control group. In Years 3 and 4, developers provided staff development and support to Cohort 2 teachers (the program ended in Cohort 1 schools). During the first two years of MCLA, developers fine-tuned service delivery based on experience gained from implementation, the feedback of participants, and data collected by evaluators. Before rolling out the Year 3 intervention, developers and school district staff made the following changes: (1) allowing all school staff who provided instruction to students to participate in MCLA and (2) permitting nonparticipants to borrow resources from the CRC.

Activities in the teacher course during Years 3 and 4 continued to be organized into three-week cycles: the first week focused on an explication of key strategies, the second week allowed teachers to model the strategies through presentations, and the third week offered them opportunities to work collaboratively with colleagues to develop their classroom action plans (CAPs).

TableII-2: Changes to MCLA Professional Development Model, Years 1 through 4

	Changes to PD Model	Total Hours Teacher Course PD	Total Hours Principal PD
Planned		90 per year for two years (total 180 hours)	45 over two years
Actual			
Year 1	n/a	85.0	20
Year 2	Assistant principals invited to attend the principal training. Special education teachers invited to attend the teacher trainings. Course format changed to rely more heavily on small-group activities and class presentations.	56.5	18 (six 3-hour sessions)
Year 3	Teacher course offered to all staff who provide instruction. Nonparticipants permitted to use CRC materials.	49.0	21 (seven 3-hour sessions)
Year 4	Teacher course offered to all staff who provide instruction. Nonparticipants permitted to use CRC materials.	42.5	12 (four 3-hour sessions)

Data sources: University of Memphis and MCS records

Brief Overview of Key Evaluation Design Features

The evaluation design for the MSRP study addresses the impacts of *READ 180* and MCLA on student and (in the case of MCLA) teacher outcomes. The measures of student outcomes are the Iowa Tests of Basic Skills (ITBS) to measure reading achievement, and the TCAP, which measures achievement in reading/language arts, mathematics, science, and social studies. Outcome measures from the ITBS include total reading standard, vocabulary, and

comprehension scores. Outcome measures from the TCAP include scale scores in the four content areas.

There are two teacher outcome measures: an index of the teacher's perceived preparation to employ literacy strategies in the classroom and an index of the teacher's perception of how frequently these strategies are employed. Each index is based on ratings of preparation or frequency for 24 literacy strategies.

Summary of Year 4 RBS Data-Collection Activities

Figure II-5 describes the methods RBS used to collect information for the Year 4 MSRP evaluation, the time frame in which data were collected, the sample sizes obtained, and associated response rates (indicated parenthetically in the sample size column). As shown, RBS collected information from participants through surveys, interviews, classroom observations, documentation review (i.e., analysis of program logs), and student assessments. Information was collected in the fall and spring semesters, and response rates were high for most sources of data.

Figure II-5: Characteristics of Year 4 RBS Data-Collection Methods

Data-Collection Method and Topic	Date Conducted	Sample size*
Surveys		
TISQU[†] (MCLA)	May 2010	*N* = 214 (98.1%)[‡]
WILA Survey (MCLA)	Fall 2009	*N* = 93 (100%) completed at least 1 survey *N* = 77 (82.8%) completed surveys at baseline, mid-term, and at follow-up.
Feedback Survey (MCLA)	Spring 2010	*N* = 44 (56.4% of completers)
Interviews		
Striving Readers School Principals	May 2010	*N* = 8 (100%)
Literacy coaches	May 2010	*N* = 6 (100%)
Observations		
READ 180 classrooms	October 2010 May 2010	*N* = 15 (93.8%) *N* = 15 (93.8%)
READ 180 classrooms	April/May 2010	*N* = 16 (100%)
MCLA Classrooms	October 2009 May 2010	*N* = 81 (87.1%) *N* = 31 (39.7%)
Student assessment		
Baseline ITBS	Fall 2009	*N* = 1,350 (sixth graders only)
Follow-up ITBS	Spring 2010	*N* = 3,907 (all students)
Secondary Data		
MCLA attendance rosters, *READ 180*meeting attendance sheets	Year 4	All available data
Coaching calendar and log entries	Year 4	*N* = 6 (100%)
TCAP	Spring 2010	Not known at this time

**Where possible, response rates are provided in parentheses.*
[†]Teacher Implementation of Strategies Questionnaire
*[‡]Response rate was calculated using MCS data file that lists all MSRP content, exploratory, and special education teachers (spring 2010). Total*N *= 233 teachers; this is the denominator used to calculate percentages.*

III. Evaluation of the Implementation of the Targeted Intervention, Years 1 through 4

Summary of the Design

Evaluators from RBS conducted many activities examining implementation of *READ 180* in MCS Striving Readers schools during Year 1 (the 2006–2007 school year); however, the requirement for creating a more in-depth analysis of implementation was not instituted until Year 2 (the 2007–2008 school year). In response to this requirement, a plan to study implementation more closely and develop classroom implementation ratings was created during Year 2. The efforts and procedures for this close study and the development of implementation ratings continued through Year 4 (2009–2010). The research questions created to evaluate the implementation of the targeted intervention are as follows:

1. What were the levels and variability of implementation of teacher professional development in Years 1 through 4?
2. What were the levels and variability of implementation at the classroom level in Years 1 through 4?

Table III-1 lists the research questions and indicates the relevant data that are available from the four years of implementation. As in Year 1, data from attendance records maintained by MCS were used to inform evaluation of professional development (PD) implementation, and Scholastic Achievement Manager (SAM) and observation data were used in the calculation of classroom implementation ratings. In Year 4, four rounds of classroom observations were conducted: twice by the evaluator, and twice by MCS. This is fewer rounds of observation than in Years 2 and 3 for two reasons: one data-gathering trip scheduled by the evaluator was cancelled due severe weather, and MCS decided that the observation feedback provided by Scholastic (as in Year 3) was not helpful. MCS did not survey students or teachers from *READ 180* classrooms in Year 4; therefore, no survey data are available for use in analyzing implementation. Open-text responses from classroom observations and brief interviews with teachers conducted immediately after evaluator observations were reviewed and used to triangulate quantitative data from the implementation ratings.

Development of the Ratings and Scale for Years 1 through 4

As noted in Table III-1, the sources of data for rating the implementation fidelity of *READ 180* included classroom observations (copies of the observation instruments can be found in Appendix B), data generated by SAM, and district documentation related to professional development. Findings from all of these sources were translated to a 4-point scale ranging from 1 to 4.[7] For all ratings, "adequate" is defined as 3 or above—the "moderate" or "high" level (on this scale, 2 is defined as "low," and 1 is defined as "minimal"). The "Professional Development

[7] The Year 1 Executive Summary of Implementation submitted in August 2008 presented classroom ratings on a four-point scale that ranged from 0 to 3. These numbers have been changed to match the scales of Years 2 through 4 and of the whole-school implementation ratings.

Scales" and "Levels and Variability of Implementation at the Classroom Level" sections each include more detailed descriptions of the specific data sources used to rate each of those areas.

Table III-1: Years 1 through 4 Data Sources Linked with Implementation Research Questions—Targeted Intervention

Research Questions	Measures/Data Sources							
	Surveys		SAM	Observations			Record Review	
	Teacher	Student	Developer/District	Evaluator	Developer	District staff	MCS—PD Attendance & online course completion records	Developer documentation and handouts
What were the levels and variability of implementation of teacher professional development in Years 1 and 2?								
Types/amount of professional development provided to teachers							Yrs. 1–4	Y2
Proportion of teachers at different levels of professional development	Yr. 1						Yrs. 1–4	
Proportion of teachers at adequate level of professional development	Yr. 1						Yrs. 1–4	
Types/amount of professional development provided to district leaders							Yrs. 3&4	
Proportion of leaders at different levels of professional development							Yrs. 3&4	
What were the levels and variability of implementation at the classroom level in Years 1 and 2?								
Proportion of classrooms supplied with materials, resources, and technology	Yr. 1	Yrs. 2&3		Yrs. 1–4	Yrs. 2&3	Yrs. 2–4		
Classrooms in which model was implemented at different levels	Yr. 1	Yrs. 2&3	Yrs. 1–4	Yrs. 1–4	Yrs. 2&3	Yrs. 2–4		
Classrooms in which model was implemented at adequate level or above	Yr. 1	Yrs. 2&3	Yrs. 1–4	Yrs. 1–4	Yrs. 2&3	Yrs. 2–4		

Note: Teachers do not always control whether a class they are teaching is on model. For example, if a*READ 180* computer server is down or students are taking a state assessment, the average number of sessions per week that students log on to the computers will drop. Therefore, it is important not to consider these simply "teacher" ratings. Also, students can be linked with their teachers; however, students of any one teacher cannot be further divided into the class sections that the teacher leads. Therefore, the ratings are most appropriately considered to be at the classroom level rather than the teacher or class period level.

Year 4 Implementation Study

Examination of implementation fidelity in Year 4 followed the same procedures established for the report of fidelity in Years 2 and 3. In fall 2008 (the beginning of the Year 3 school year), as part of its efforts to serve students who were expected (by the district) to benefit from extra instruction to improve their reading skills, MCS began offering more *READ 180* classes in more middle and high schools. This effort substantially increased the number of schools that offered *READ 180* and reflected a districtwide emphasis on the program. The emphasis was not specific to Striving Readers schools; however, they were affected and involved. This increase in emphasis on *READ 180* program components during Year 3 largely continued during Year 4 and may be related to the increase in the amount of time students spent using *READ 180* computer software (see Table III-6).

Professional Development Levels

In Year 4, the professional development participation score again was developed by combining the numbers of points assigned to different types of professional development. Data related to all 16 Year 4 *READ 180* teachers were drawn from MCS PD sign-in sheets and other documentation provided by project staff members. During the 2008–2009 school year, MCS began emphasizing training for administrators in schools that offered *READ 180*. Therefore, in addition to the same four types of professional development recognized in Year 2, the PD ratings for Year 3 included an extra point if an administrator (or someone serving in a coaching or PD-facilitating role) attended a half-day administrator training; this "administrator point" was also included in the Year 4 calculations. MCS did not emphasize the Scholastic online course in Years 3 or 4; however, many teachers completed the course in Year 2, and three points were added to the calculations of Year 4 ratings of teachers who had completed the online course. Similarly, *READ 180* teachers who attended networking meetings and/or full-day trainings in Year 3 were awarded additional points toward the Year 4 ratings. According to district staff members, the Year 4 sessions and meetings included some information new in Year 4 and some that had been presented during Year 3. Therefore, teachers were awarded half of the number of points for attendance at Year 3 compared to Year 4 trainings. Further theorizing that teachers who are more familiar with the materials and procedures of *READ 180* are better prepared to teach it, RBS evaluators awarded teachers who had taught *READ 180* in previous years additional points, as noted below.

- attendance at any all-day session earned 2 points for each session attended (attendance at each all-day session in 2008–2009 earned 1)
- attendance at any networking meeting earned 1 point for each meeting attended (attendance at each networking meeting in 2008–2009 earned 0.5)
- the first year of experience teaching *READ 180* earned 2 points, and any number of years of experience beyond that earned 3
- completion of the Scholastic's online course earned 3 points
- attendance at administrator training by an administrator or literacy coach earned each of that school's teachers 1 point

This resulted in a possible total of 19 points. Evaluators used the same equation of raw score to ratings in Years 3 and 4 as in Year 2: professional development scale scores greater than or equal to ten are considered "high," those seven or higher are considered "moderate," those four or higher are "low," and scores three and below are "minimal." These ratings are included in the "Rating" column of Table III-2. In order to receive a "high" rating, a teacher would have to participate in at least three types of professional development or at least two types if someone from his or her school attended administrator training. Table III-2 indicates the number and type of professional development opportunities completed by all 16 Year 4 teachers.

Table III-2: Teacher Completion of Year 4 *READ 180* Professional Development Opportunities (*N* = 16)

Unique ID	Full Days	Network Mtgs.	Yrs. Exp.	Online course	Admin.	Score	Rating
8348	**2**	**3**	**3**	**Y**	**Y**	**16**	**4**
2109	**2**	**4**	**3**	**N**	**Y**	**15**	**4**
5224	**2**	**1**	**3**	**Y**	**N**	**13**	**4**
5102	**3**	**0**	**3**	**Y**	**Y**	**13**	**4**
4781	**2**	**0**	**3**	**Y**	**N**	**12**	**4**
5541	**2**	**0**	**3**	**Y**	**Y**	**11**	**4**
6033	**2**	**1**	**3**	**N**	**Y**	**11**	**4**
4420	**1**	**0**	**3**	**Y**	**Y**	**10.5**	**4**
5546	**1**	**1**	**3**	**Y**	**N**	**10**	**4**
3973	**1**	**2**	**3**	**N**	**Y**	**9.5**	**4**
4536	**2**	**0**	**2**	**N**	**Y**	**9**	**3**
6410	**2**	**0**	**3**	**N**	**Y**	**9**	**3**
3328	**1**	**0**	**3**	**N**	**Y**	**7.5**	**3**
3771	**2**	**0**	**2**	**N**	**Y**	**7**	**3**
8177	2	1	0	N	Y	6	2
8933	1	0	0	N	N	2	1

Data source: Training sign-in sheets provided by MCS
Notes: Ratings defined as "adequate" or above are in bold. ID numbers were randomly generated and are used only to identify classrooms from year to year. All ratings are on a 4-point scale in which 4= high, 3=moderate, 2=low, and 1=minimal; "adequate" is defined as 3 or above.

Professional Development Levels in all Four Years

Table III-3 lists the professional development ratings for all teachers in Striving Readers schools in all four years of the project. As shown in the table, the average PD ratings increased steadily over the four years of the project.

Table III-3: Teacher Professional Development Ratings, Years 1 through 4

Unique ID	Year 1	Year 2	Year 3	Year 4	Average
2026	--	4	--	--	**4.0**
2109	4	4	4	4	**4.0**
5102	--	--	--	4	**4.0**
6033	3	4	4	4	**3.8**
5546	--	3	4	4	**3.7**
4420	4	2	4	4	**3.5**
4781	4	2	4	4	**3.5**
6132	3	4	--	--	**3.5**
8348	3	3	4	4	**3.5**
3566	3	3	4		**3.3**
5224	3	2	4	4	**3.3**
1223	3	--	--	--	**3.0**
1988	--	--	3	--	**3.0**
3771	--	--	--	3	**3.0**
3801	--	3	--	--	**3.0**
4536	--	--	3	3	**3.0**
5133	3	--	--	--	**3.0**
5163	3	--	--	--	**3.0**
5499	--	3	--	--	**3.0**
5515	--	3	--	--	**3.0**
5541	3	3	2	4	**3.0**
6135	--	--	3	--	**3.0**
9631	--	--	3	--	**3.0**
3973	1	3	3	4	2.8
3328		2	3	3	2.7
5535	3	--	2	--	2.5
6410	1	3	3	3	2.5
2918	2	3	2	--	2.3
2983	2	--	--	--	2.0
8177	--	--	--	2	2.0
8213	2	--	--	--	2.0
8877	--	2	--	--	2.0
6684	--	--	1	--	1.0
7273	1	--	--	--	1.0
8933	--	--	--	1	1.0
Average	2.7	2.9	3.2	3.4	

Data sources: MSRP Implementation reports, Years 1 through 4

Levels and Variability of Implementation at the Classroom Level

Implementation fidelity and variability were informed by data collected through classroom observations and data generated by the Scholastic Achievement Manager (SAM). In Year 4, as

in Years 1 through 3, the focus for assessment of implementation was the resources and instruction that were made available to or completed by students, not how well students performed on tasks or assessments.

SAM captures data as students use the *READ 180* software during the computer rotation. Teachers also have the option of entering additional data, and as part of the model, teachers are encouraged to generate automated reports about student progress from SAM on a regular basis (the actual time between reports varies from weekly to about quarterly depending on the report). Table III-4 presents the frequencies with which teachers say they used SAM reports.

Table III-4: Reported Frequencies with which *READ 180* Teachers Used SAM Reports (*N* = 16)

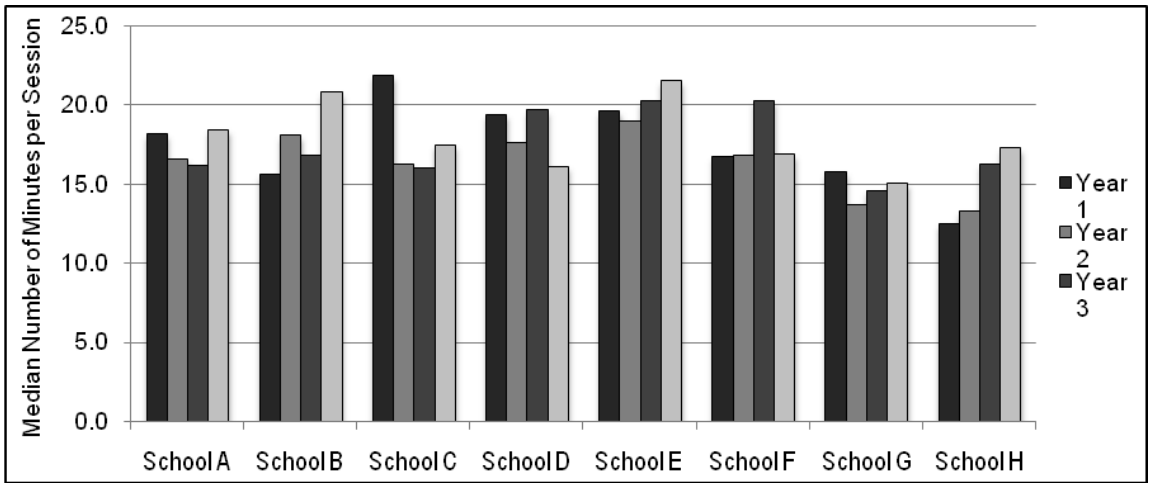
Report name	Number
More than weekly	10
Weekly	1
Quarterly	2
Missing*	3

Data source: Postobservation interviews of READ 180 teachers conducted by RBS in spring 2010
**Two teachers were not available to be interviewed after the observation; one teacher refused to be observed or interviewed.*

As part of creating the classroom ratings, RBS evaluators included two SAM variables related to student use of the software: the average number of sessions per week that students used the software and the median number of minutes students spent using the software during each daily session. Perfect implementation of *READ 180* involves students working in the computer rotation for 20 minutes every school day. Recognizing that students need time to move from rotation to rotation during class and that school schedules often fluctuate, Scholastic has identified adequate implementation at 15 minutes per day at least 3 days per week. Figures III-1 and III-2 provide cross-year comparisons of the median number of minutes per session and the average number of sessions per week. As can be seen in Figure III-1, by Year 4, all schools had at least 15 minutes per student per day using *READ 180* software; the average across schools is 17.9 minutes. Similarly, as shown in Figure III-2, the average number of days per week increased from 2.3 to 2.7, and the lowest number of days per week increased from 1.7 to 2.2.

The data represented in Figures III-1 and III-2 show school-level differences in SAM data. To determine whether there are significant classroom-level differences between Years 3 and 4, evaluators conducted independent t-tests. These tests indicate that there was a significant improvement from 2.217 sessions per week in Year 3 to 2.752 sessions per week in Year 4 [$t(33) = 5.161$, $p = .000$], but there was no significant difference in the median amount of time per session.

Figure III-1: Year-by-Year Averages of the Median Amount of Time (in minutes) that Students Spent Using *READ 180* Software per Session in each School



Data source: SAM (from years 1 through 4)

However, when evaluators analyzed data from the students of the 12 teachers who taught in both Years 3 and 4, paired-samples t-tests showed significant differences in both average sessions per week and median minutes per session. The number of sessions per week increased from 2.242 in Year 3 to 2.772 in Year 4 [$t(11) = 6.932$, $p = .000$], and the median number of minutes per session increased from 16.19 in Year 3 to 18.48 in Year 4 [$t(11)= 3.651$, $p = .004$]. While the number of sessions per week remains below the Scholastic-recommended number (3), the number of minutes in each session is substantially higher than the recommendation of 15.

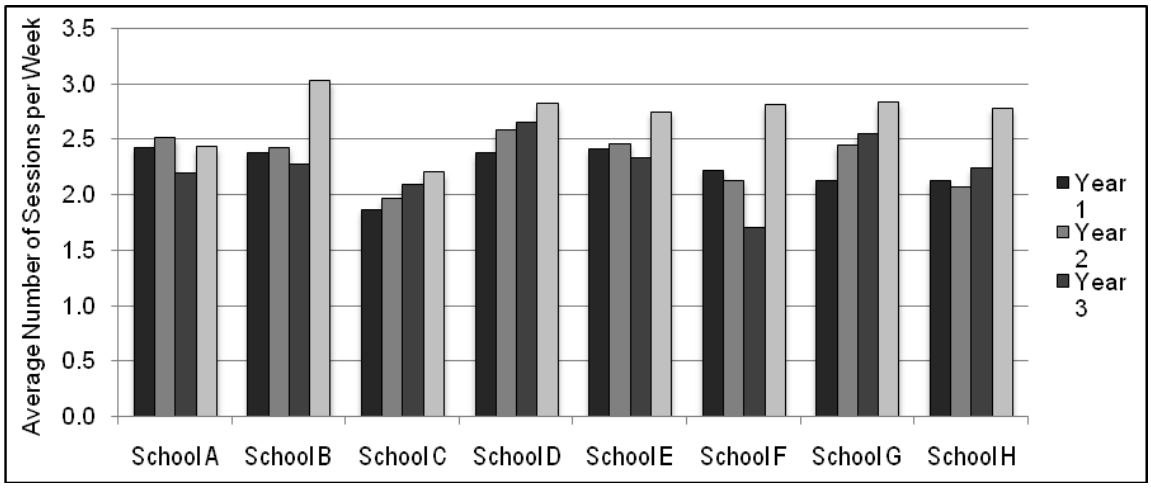
By multiplying the average number of sessions per week by the median number of minutes per session and by the number of weeks in a school year (36), researchers found that on average, students in Year 4 classes of teachers who had also taught in Year 3 experienced 545 more minutes using the *READ 180* software than their Year 3 counterparts [$t(11) = 5.622$, $p = .000$]. These findings seem to indicate that the district has decreased the amount of time that computer problems prevented use of the software and/or that, as teachers gain experience teaching *READ 180*, they have increased the amount of time their students spend using the software.

As in Year 3, evaluators examined all included variables and created an equation for translating each SAM or observational variable to the four-point scale. Next, an equation was created that encompassed the data from all observations into one overall observation rating for each classroom (this equation appears as Appendix C). Finally, the overall observation rating, the SAM rating, and the PD rating were averaged into one overall classroom rating.

All of the 16 classrooms had SAM data; each classroom was observed at least twice. Whole-group instruction and independent reading are activities that, according to interviews with district staff members, occur in many regular language arts classes. Therefore, data related to the small-group instruction and computer rotations were weighted more heavily because they are components of the *READ 180* program that distinguish the program from the regular language arts classes offered. Also, in the calculations of overall classroom implementation level,

observations were weighted the most heavily because they addressed all components of *READ 180*. SAM data and the professional development scale followed these in weight.

Figure III-2: Year-by-Year Averages of the Number of *READ 180* Software-Rotation Sessions Students Completed each Week in each School



Data source: SAM (from years 1 through 4)

During the 2009–2010 school year, members of the evaluation team completed classroom observations (N = 30) during October (n = 15) and March (n = 15). MCS staff members completed observations (N = 31) during October (n = 15) and during February and March (n = 16). Observers from RBS used different observation protocols than MCS observers. Therefore, evaluators identified items that were similar across the two protocols and used those to calculate the observation ratings. The items used related to the following:

- the timing of the class (that is, whether the class had four 20-minute and one 10-minute segments)
- the number of students (seven or fewer) in each small group
- the layout of the room (structured to support the requirements of all rotations)
- content and student engagement in whole-group instruction and the small-group instruction, computer, and independent reading rotations
- use of the Scholastic *flexBook* and/or other *READ 180* materials for instruction

To create ratings for the computer rotation, RBS evaluators linked students to their *READ 180* teachers and averaged the available data from all students taught by each teacher. As noted above, the SAM variables used for this report included the following:

- average number of *READ 180* computer software sessions per week
- median daily number of minutes spent in these sessions

Table III-5 presents the completed Year 4 ratings for all *READ 180* teachers/classrooms in Striving Readers Schools. The ratings on professional development, from observations, and from SAM were averaged to create the overall rating for each teacher.

Table III-5: Year 4*READ 180* Fidelity of Implementation Teacher/Classroom Ratings (*N* = 16)

Classroom ID	Professional Development	Observations	SAM	Overall Rating
8348	**4**	**3.7**	**4.0**	**3.9**
6033	**4**	**3.9**	**3.0**	**3.6**
4781	**4**	**3.7**	**3.0**	**3.6**
5224	**4**	**3.6**	**3.0**	**3.5**
3328	**3**	**3.4**	**4.0**	**3.5**
4420	**4**	**3.3**	**3.0**	**3.4**
6410	**3**	**3.2**	**4.0**	**3.4**
5541	**4**	**3.9**	2.0	**3.3**
3973	**4**	2.9	**3.0**	**3.3**
3771	**3**	**3.8**	**3.0**	**3.3**
5102	**4**	**3.7**	2.0	**3.2**
2109	**4**	2.4	**3.0**	**3.1**
5546	**4**	**3.3**	2.0	**3.1**
4536	**3**	**3.7**	2.0	2.9
8177	2	**3.8**	2.0	2.6
8933	1	**3.3**	**3.0**	2.4
Number "Adequate"	14	14	11	13
Percent "Adequate"	**87.50**	**87.50**	**68.75**	**81.25**

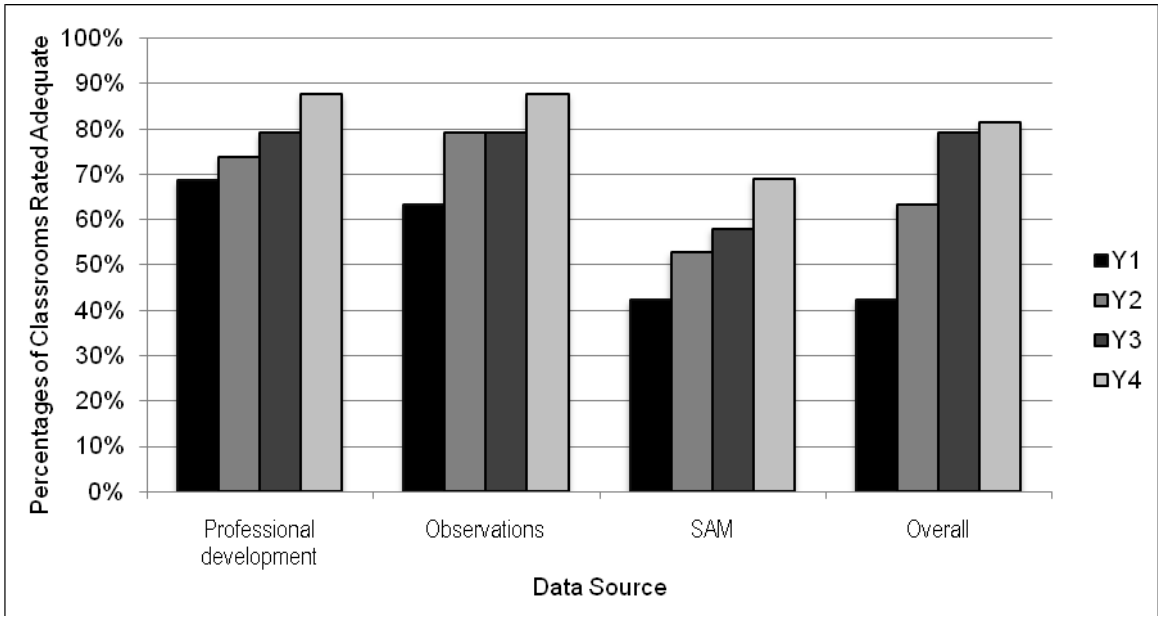
Notes: ID numbers were randomly generated and are used only to identify classrooms from year to year. All ratings are on a 4-point scale in which 4 = high, 3= moderate, 2 =low, and 1= minimal; "adequate" is defined as 3 or above.

Conclusions Regarding Implementation of the Targeted Intervention

Analyses of data related to *READ 180* implementation indicate that there is still a fairly wide range of implementation across classrooms in the eight Striving Readers schools and that implementation has improved each year. Figure III-3 shows the percentages of classrooms that were rated as adequate in Years 1 through 4.

Direct comparisons within 12 classrooms are possible, and those comparisons are presented in Table III-6 (because of teacher turnover, direct comparisons in the remaining classes are not possible). As shown in the "Overall Rating" column in Table III-6, nine of twelve classrooms (75%) had improved classroom ratings in Year 4 over Year 3, and there was an average increase in every area.

Figure III-3: Percentages of Classrooms Rated Adequate in Years 1 Through 4



Note: Readers are cautioned against inferring too much from the comparisons between Years 1 and 2 because of differences in PD implementation and in the amounts of data available. N = *19 in Years 1, 2, 3;* N = *16 in Year 4.*

Table III-6: Differences Between Ratings of Classrooms from 2008–2009 to 2009–2010 (*N* = 12)

Classroom ID	Professional Development			Observation Ratings			SAM			Overall Rating		
	Y3	Y4	Δ	Y3	Y4	Δ	Y3	Y4	Δ	Y3	Y4	Δ
2109	4.00	4.00	0.00	3.40	2.42	-0.98	2.50	3.00	0.50	3.28	3.14	-0.14
3328	3.00	3.00	0.00	3.10	3.39	0.29	3.00	4.00	1.00	3.13	3.46	0.34
3973	3.00	4.00	1.00	2.90	2.90	0.00	3.00	3.00	0.00	3.15	3.30	0.15
4420	4.00	4.00	0.00	3.20	3.33	0.13	3.50	3.00	-0.50	3.33	3.45	0.12
4536	3.00	3.00	0.00	3.20	3.67	0.47	2.50	2.00	-0.50	3.10	2.89	-0.21
4781	4.00	4.00	0.00	3.40	3.72	0.32	3.00	3.00	0.00	3.33	3.57	0.25
5224	4.00	4.00	0.00	3.10	3.57	0.47	2.50	3.00	0.50	3.25	3.52	0.27
5541	2.00	4.00	2.00	3.40	3.92	0.52	2.50	2.00	-0.50	2.75	3.31	0.56
5546	4.00	4.00	0.00	3.10	3.29	0.19	2.50	2.00	-0.50	3.18	3.09	-0.08
6033	4.00	4.00	0.00	3.30	3.94	0.64	3.00	3.00	0.00	3.43	3.65	0.22
6410	3.00	3.00	0.00	3.50	3.15	-0.35	3.00	4.00	1.00	3.20	3.38	0.18
8348	4.00	4.00	0.00	3.60	3.73	0.13	3.00	4.00	1.00	3.48	3.91	0.44
Average Δ, Y3 to Y4			0.25			0.15			0.17			0.18

Data source: ratings developed and presented in this report and the Year 3 report

The data and analyses in this report indicate that most of the classes that make up the targeted intervention had fairly high levels of fidelity to the *READ 180* model. This conclusion is supported by Scholastic's presentation of a report to MCS after Year 3, which indicated that, according to Scholastic's observations and metrics, almost all classes were at least 90 percent on

model during Year 3. Because the implementation ratings conducted by RBS have increased from Year 3 to Year 4, it is reasonable to speculate that if Scholastic had conducted a Year 4 evaluation of implementation fidelity, they would again conclude that most classes are substantially on model. Combined with the finding that in Year 4 there were again no significant differences between *READ 180* students and the control group, there are at least three inferences that can be drawn from this:

1. Improvements need to be made in recognizing and assigning those students who can benefit from *READ 180* (i.e., reviewing research from other Striving Readers evaluations and other studies that indicate whether there are specific subgroups of students who might benefit from *READ 180*).
2. Improvements are needed in measuring the quality and level of implementation (for example, increasing the number, depth, and breadth of observations, teacher self-reports, and other data sources and/or exploring the use of new statistical models for attributing fidelity to achievement).
3. One or two years of participation in the *READ 180* program did not help struggling readers more than other instruction or interventions used by MCS during the time of the study.

Description of the Counterfactual and Development of the Intent-to-Treat Sample for the Targeted Intervention

The targeted intervention is *supplemental*, so all students identified as the target population are also enrolled in a "regular" language arts class, whether or not they were selected to be enrolled in *READ 180*. Treatment students in three schools receive a truncated period for language arts: they are enrolled in a two-hour class that combines 90 minutes of *READ 180* with 30 minutes of language arts instruction, while control students in these schools are enrolled in "regular" language arts classes that last 45 to 55 minutes.

Students in both the treatment and control groups might also participate in additional classes related to language arts. Some of these are reading classes, and this is made clear in the class name. Table III-7 provides a list of all of the classes related to reading and ELA in which evaluators found evidence of enrollment of either treatment or control students, sorted by grade. Class registration data were collected to detail how many treatment and control students were assigned to these classes. The shaded rows show the enrollment of students, by experimental condition, in *READ 180* during Year 4: there was no evidence that any control students were enrolled in *READ 180*.

Tables III-8 to III-19 describe the steps that evaluators took to arrive at the samples used for the Intent-to-Treat (ITT) analyses that are included in Section IV. As shown in the tables, all students in the enrollment files provided by MCS who had enrolled by a specific date early in the school year were included in the overall sample (for example, students who were enrolled by August 28, 2009, were included in the Year 4 analyses). Of these students, those who had valid pretest and posttest scores and about whom evaluators received demographic data were included

in the final analyses. Because of substantial changes made to the TCAP between Years 3 and 4, and because of the lack of statistically significant findings, not all tests were analyzed for all groups and years; therefore some analysis groups include all TCAP tests, some include only TCAP Reading/LA, and some include not TCAP tests. For detailed explanations of the analyses, please see section IV.

The numbers in the counterfactual table differ from the numbers in the flow chart tables describing ITT samples because of the more specific nature of the counterfactual information. The ITT samples include all students that have pretest and posttest scores and the demographic variables. However, the counterfactual numbers only include those students whom RBS can link (via course registration files) to a specific *READ 180,* reading, or ELA teacher for at least half of the school days between pre- and posttest. Finally, the counterfactual numbers should not be added together because students might take more than one of these classes.

Table III-7: Numbers of ITT Students Enrolled for 50+ Days in Reading and ELA-Related Courses, by School and Experimental Condition

Course Name	Grades Offered	School A		School B		School C		School D		School E		School F		School G		School H	
		Control	*READ 180*	Control	*READ 180*	Control	*READ 180*	Control	*READ 180*	Control	*READ 180*	Control	*READ 180*	Control	*READ 180*	Control	*READ 180*
Creative Writing 6-90	6	3	1														
Creative Writing 7-180	7									27	9						
Creative Writing 7-90	7															5	0
Language Arts 06	6	28	22	59	31	13	17	10	19	56	36	10	23	8	33	44	20
Language Arts 07	7	11	22	32	27	1	11	3	18	26	17	2	14	7	17	31	17
Language Arts 07 Honors	7	2	0	4	0	2	0	1	0	2	3						
Reading 6-180	6	28	1	70	5	11	5	10	1	0	23					24	14
Reading 7-180	7	13	0	39	1	2	0			0	13	10	0	1	9	25	2
Scholastic Read 6-180	6	0	21	0	29	0	11	0	18	0	23	0	23	0	33	0	30
Scholastic Read 7-180	7	0	22	0	26	0	9	0	15	0	13	0	14	0	17	0	14
Word Bldg Expl 6-90	6					3	12										
Word Study Skills 6-180	6													6	13		
Content Area Read 6-180	6									55	13						

Data sources: Year 4 enrollment data, Year 4 course enrollment data, and READ 180 *random assignment data*

Table III-8: Analysis of Sample Size for One-Year Impact of *READ 180* on Spring 2007 Scores—Sixth- through Eighth-Grade Students, Year 1

	TCAP								ITBS					
	Reading/LA		Mathematics		Science		Soc. Studies		Total Reading		Comprehension		Vocabulary	
	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt
Total in ITT Group	698	1042	698	1042	698	1042	698	1042	698	1042	698	1042	698	1042
(A) Valid outcome measure obtained	662	972	662	972	650	931	651	925	532	751	536	754	538	758
Valid outcome measure not obtained:	34	70	36	70	48	111	46	117	166	291	162	288	160	284
Student left before TCAP/ITBS	28	56	28	56	28	56	28	56	27	58	27	58	27	58
Enrolled, but no TCAP/ITBS score	3	2	3	2	3	2	3	2	139	233	135	230	133	226
Other reason	3	12	5	12	17	53	16	59	0	0	0	0	0	0
(B) Valid pretest measure obtained*	698	1042	697	1040	686	1006	685	1007	656	940	660	944	658	950
Valid pretest measure not obtained:	0	0	1	2	12	36	13	35	42	102	38	98	40	92
Unknown	0	0	1	2	12	36	13	35	42	102	38	98	40	92
(C) Demographic Characteristics Obtained	698	1042	698	1042	698	1042	698	1042	698	1042	698	1042	698	1042
Total with (A), (B), and (C)†	664	972	661	971	643	915	644	906	511	712	517	718	519	726

**For each outcome measure (e.g., ITBS Total Reading), the same type of pretest measure was used as a covariate (e.g., ITBS Total Reading).*

†The numbers shown in this row indicate the number of records that were used in the impact models.

Table III-9: Analysis of Sample Size for One-Year Impact of *READ* 180—Sixth-Grade Students, Year 1

	TCAP								ITBS					
	Reading/LA		Mathematics		Science		Soc. Studies		Total Reading		Comprehension		Vocabulary	
	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt
Total in ITT Group	239	392	239	392	239	392	239	392	239	392	239	392	239	392
(A) Valid outcome measure obtained	228	372	227	372	223	360	224	359	184	298	184	298	185	298
Valid outcome measure not obtained:	11	20	12	20	16	32	15	32	55	94	55	94	54	94
Enrolled, but no TCAP/ITBS score	1	0	1	0	1	0	1	0	47	77	47	77	46	77
Student Left before TCAP/ITBS	7	15	7	15	7	15	7	15	8	17	8	17	8	17
Other reason	3	5	4	5	8	17	7	18	0	0	0	0	0	0
(B) Valid pretest measure obtained*	239	392	236	377	236	377	235	375	229	365	230	366	230	368
Valid pretest measure not obtained:	0	0	3	15	3	15	4	17	10	27	9	26	9	24
Unknown	0	0	3	15	3	15	4	17	10	27	9	26	9	24
(C) Demographic Characteristics Obtained	239	392	239	392	239	392	239	392	239	392	239	392	239	392
Total with (A), (B), and (C)†	228	372	227	372	221	352	222	349	178	287	179	288	180	290

** For each outcome measure (e.g., ITBS Total Reading), the same type of pretest measure was used as a covariate (e.g., ITBS Total Reading).*

†The numbers shown in this row indicate the number of records that were used in the impact models.

Table III-10: Analysis of Sample Size for One-Year Impact of *READ 180*—Sixth-Grade Students, Year 2

	TCAP								ITBS					
	Reading/LA		Mathematics		Science		Soc. Studies		Total Reading		Comprehension		Vocabulary	
	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt
Total in ITT Group	289	404	289	404	289	404	289	404	289	404	289	404	289	404
(A) Valid outcome measure obtained	278	391	278	391	278	391	277	385	234	324	234	327	235	328
Valid outcome measure not obtained:	11	13	11	13	11	13	12	19	55	80	55	77	54	76
Student left before TCAP/ITBS	4	9	4	9	4	9	4	9	29	41	29	41	29	41
Absent	0	0	0	0	0	0	0	0	21	24	21	24	21	24
Enrolled, but no TCAP/ITBS score	4	2	4	2	4	2	4	2	0	0	0	0	0	0
Non-consent	0	0	0	0	0	0	0	0	4	5	4	5	4	5
Late add	0	0	0	0	0	0	0	0	0	3	0	3	0	3
Other reason	3	2	3	2	3	2	4	8	1	7	1	4	0	3
(B) Valid pretest measure obtained*	289	403	289	403	283	400	283	399	247	364	247	365	252	365
Valid pretest measure not obtained:	0	1	0	1	6	4	6	5	42	40	42	39	37	39
Unknown	0	1	0	1	6	4	6	5	42	40	42	39	37	39
(C) Demographic Characteristics Obtained	289	404	289	404	289	404	289	404	289	404	289	404	289	404
Total with (A), (B), and (C)†	278	390	278	390	272	387	272	380	204	295	204	299	210	299

**For each outcome measure (e.g., ITBS Total Reading, the same type of pretest measure was used as a covariate, e.g., ITBS Total Reading).*

†The numbers shown in this row indicate the number of records that were used in the impact models.

Table III-11: Analysis of Sample Size for One-Year Impact of *READ 180*—Sixth-Grade Students, Year 3

	TCAP								ITBS					
	Reading/LA		Mathematics		Science		Soc. Studies		Total Reading		Comprehension		Vocabulary	
	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt
Total in ITT Group	274	223	274	223	274	223	274	223	274	223	274	223	274	223
(A) Valid outcome measure obtained	270	217	270	217	269	216	269	217	230	189	230	190	231	189
Valid outcome measure not obtained:	4	6	4	6	5	7	5	6	44	34	44	33	43	34
Student left before TCAP/ITBS	4	6	4	6	4	6	4	6	25	23	25	23	25	23
Absent	0	0	0	0	0	0	0	0	12	6	12	6	12	6
Enrolled, but no TCAP/ITBS score	0	0	0	0	0	0	0	0	4	1	4	0	3	1
Non-consent	0	0	0	0	0	0	0	0	3	4	3	4	3	4
Unknown (Other reason)	0	0	0	0	1	1	1	0	0	0	0	0	0	0
(B) Valid pretest measure obtained*	273	222	273	222	273	222	273	219	237	205	263	215	238	205
Valid pretest measure not obtained:	1	1	1	1	1	1	1	4	37	18	11	8	36	18
Unknown	1	1	1	1	1	1	1	4	37	18	11	8	36	18
(C) Demographic Characteristics Obtained	274	223	274	223	274	223	274	223	274	223	274	223	274	223
Total with (A), (B), and (C)†	269	216	269	216	268	215	268	213	204	176	225	187	205	176

**For each outcome measure (e.g., ITBS Total Reading), the same type of pretest measure was used as a covariate (e.g., ITBS Total Reading).*

†The numbers shown in this row indicate the number of records that were used in the impact models.

Table III-12: Analysis of Sample Size for One-Year Impact of *READ 180*—Sixth-Grade Students, Year 4

	TCAP		ITBS					
	Reading/LA		Total Reading		Comprehension		Vocabulary	
	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt
Total in ITT Group	238	259	238	259	238	259	238	259
(A) Valid outcome measure obtained	211	234	191	214	192	214	191	214
Valid outcome measure not obtained:	27	25	47	45	46	45	47	45
Student left before TCAP/ITBS	0	0	31	24	31	24	31	24
Absent	0	0	0	0	0	0	0	0
Enrolled, but no TCAP/ITBS score	0	0	16	21	15	21	16	21
Non-consent	0	0	0	0	0	0	0	0
Unknown (Other reason)	27	25	0	0	0	0	0	0
(B) Valid pretest measure obtained*	238	259	215	242	216	242	215	243
Valid pretest measure not obtained:	0	0	23	17	22	17	23	16
Unknown	0	0	23	17	22	17	23	16
(C) Demographic Characteristics Obtained	238	259	238	259	238	259	238	259
Total with (A), (B), and (C)[†‡]	211	234	174	208	176	208	174	209

** For each outcome measure (e.g., ITBS Total Reading), the same type of pretest measure was used as a covariate (e.g., ITBS Total Reading).*

† The numbers shown in this row indicate the number of records that were used in the impact models.

Table III-13: Analysis of Sample Size for One-Year Impact of *READ 180*— Sixth-Grade Students, Years 1 through 4

	ITBS					
	Total Reading		Comprehension		Vocabulary	
	Trt	Cnt	Trt	Cnt	Trt	Cnt
Total in ITT Group	1034	1264	1034	1264	1034	1264
(A) Valid outcome measure obtained	835	1017	836	1021	838	1021
Valid outcome measure not obtained:	199	247	198	243	196	243
Student left before TCAP/ITBS	132	161	132	161	131	161
Absent	28	39	27	38	27	39
Enrolled, but no TCAP/ITBS score	31	28	31	28	31	28
Non-consent	7	9	7	9	7	9
Unknown (Other reason)	1	10	1	7	0	6
(B) Valid pretest measure obtained*	923	1164	951	1176	930	1169
Valid pretest measure not obtained:	111	100	83	88	104	95
Unknown	111	100	83	88	104	95
(C) Demographic Characteristics Obtained	1034	1264	1034	1264	1034	1264
Total with (A), (B), and (C)†	757	959	781	975	766	967

** For each outcome measure (e.g., ITBS Total Reading), the same type of pretest measure was used as a covariate (e.g., ITBS Total Reading).*

† The numbers shown in this row indicate the number of records that were used in the impact models. The current sample size is slightly smaller than the cumulative sample size of the past four years because students who were retained in grade have been removed from the current analyses.

Table III-14: Analysis of Sample Size for One-Year Impact of *READ 180*—Sixth- through Eighth-Grade Students in Year 1 and Sixth-Grade Students in Years 2–4

	ITBS					
	Total Reading		Comprehension		Vocabulary	
	Trt	Cnt	Trt	Cnt	Trt	Cnt
Total in ITT Group	1493	1914	1493	1914	1493	1914
(A) Valid outcome measure obtained	1183	1470	1188	1477	1191	1481
Valid outcome measure not obtained:	310	444	305	437	302	433
Student left before TCAP/ITBS	112	142	112	142	112	142
Absent	159	255	154	251	152	248
Enrolled, but no TCAP/ITBS score	31	28	31	28	31	28
Non-consent	7	9	7	9	7	9
Unknown (Other reason)	1	10	1	7	0	6
(B) Valid pretest measure obtained*	1350	1739	1381	1754	1358	1751
Valid pretest measure not obtained:	143	175	112	160	135	163
Unknown	143	175	112	160	135	163
(C) Demographic Characteristics Obtained	1493	1914	1493	1914	1493	1914
Total with (A), (B), and (C)†	1090	1384	1119	1405	1105	1403

** For each outcome measure (e.g., ITBS Total Reading), the same type of pretest measure was used as a covariate (e.g., ITBS Total Reading).*

† The numbers shown in this row indicate the number of records that were used in the impact models. The current sample size is slightly smaller than the cumulative sample size of the past four years because students who were retained in grade have been removed from the current analyses.

Table III-15: Analysis of Sample Size for Two-Year Impact of *READ* 180—Seventh- and Eighth-Grade "Stayers," Year 2

	TCAP								ITBS					
	Reading/LA		Mathematics		Science		Soc. Studies		Total Reading		Comprehension		Vocabulary	
	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt
Total in ITT Group	319	501	319	501	319	501	319	501	319	501	319	501	319	501
(A) Valid outcome measure obtained	316	498	316	498	316	496	313	493	281	419	271	426	276	426
Valid outcome measure not obtained:	3	3	3	3	3	5	6	8	48	82	48	75	43	75
Absent	0	0	0	0	0	0	0	0	34	54	34	54	34	54
Enrolled, but no TCAP/ITBS score	2	1	2	1	2	1	2	1	0	0	0	0	0	0
Non-consent	0	0	0	0	0	0	0	0	7	9	7	9	7	9
Late add	0	0	0	0	0	0	0	0	1	0	1	0	1	0
Other reason	1	2	1	2	1	4	3	7	6	19	6	12	1	12
(B) Valid pretest measure obtained*	319	501	318	501	315	482	316	482	305	472	305	474	306	476
Valid pretest measure not obtained:	0	0	1	0	4	19	3	19	14	27	14	25	13	23
Unknown	0	0	1	0	4	19	3	19	14	27	14	25	13	23
(C) Demographic Characteristics Obtained	319	501	319	501	319	501	319	501	319	501	319	501	319	501
Total with (A), (B), and (C)†	316	498	315	498	312	478	310	474	262	398	260	405	266	407

** For each outcome measure (e.g., ITBS Total Reading), the same type of pretest measure was used as a covariate (e.g., ITBS Total Reading).*

† The numbers shown in this row indicate the number of records that were used in the impact models.

Table III-16: Analysis of Sample Size for Two-Year Impact of *READ* 180—Seventh-Grade Students, Year 2

	TCAP								ITBS					
	Reading/LA		Mathematics		Science		Soc. Studies		Total Reading		Comprehension		Vocabulary	
	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt
Total in ITT Group	195	274	195	274	195	274	195	274	195	274	195	274	195	274
(A) Valid outcome measure obtained	193	274	193	274	193	274	192	273	170	230	170	230	176	244
Valid outcome measure not obtained:	2	0	2	0	2	0	3	1	25	44	25	44	19	30
Student left before TCAP/ITBS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Student in high school	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enrolled, but no TCAP/ITBS score	2	0	2	0	2	0	3	1	10	24	10	24	4	10
Unknown	0	0	0	0	0	0	0	0	1	0	1	0	1	0
Absent	0	0	0	0	0	0	0	0	7	17	7	17	7	17
Non-consenter	0	0	0	0	0	0	0	0	7	3	7	3	7	3
(B) Valid pretest measure obtained*	195	274	195	274	191	271	191	270	169	248	169	249	173	249
Valid pretest measure not obtained:	0	0	0	0	4	3	4	4	26	26	26	25	22	25
Unknown	0	0	0	0	4	3	4	4	26	26	26	25	22	25
(C) Demographic Characteristics Obtained	195	274	195	274	195	274	195	274	195	274	195	274	195	274
Total with (A), (B), and (C)†	193	274	193	274	189	271	188	269	145	207	145	208	155	221

** For each outcome measure (e.g., ITBS Total Reading), the same type of pretest measure was used as a covariate (e.g., ITBS Total Reading).*

† The numbers shown in this row indicate the number of records that were used in the impact models.

Table III-17: Analysis of Sample Size for Two-Year Impact of *READ 180*—Seventh-Grade Students, Year 3

	TCAP								ITBS					
	Reading/LA		Mathematics		Science		Soc. Studies		Total Reading		Comprehension		Vocabulary	
	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt
Total in ITT Group	195	274	195	274	195	274	195	274	195	274	195	274	195	274
(A) Valid outcome measure obtained	193	274	193	274	193	274	192	273	170	230	170	230	176	244
Valid outcome measure not obtained:	2	0	2	0	2	0	3	1	25	44	25	44	19	30
Enrolled, but no TCAP/ITBS score	2	0	2	0	2	0	3	1	10	24	10	24	4	10
Unknown	0	0	0	0	0	0	0	0	1	0	1	0	1	0
Absent	0	0	0	0	0	0	0	0	7	17	7	17	7	17
Non-consenter	0	0	0	0	0	0	0	0	7	3	7	3	7	3
(B) Valid pretest measure obtained*	195	274	195	274	191	271	191	270	169	248	169	249	173	249
Valid pretest measure not obtained:	0	0	0	0	4	3	4	4	26	26	26	25	22	25
Unknown	0	0	0	0	4	3	4	4	26	26	26	25	22	25
(C) Demographic Characteristics Obtained	195	274	195	274	195	274	195	274	195	274	195	274	195	274
Total with (A), (B), and (C)†	193	274	193	274	189	271	188	269	145	207	145	208	155	221

** For each outcome measure (e.g., ITBS Total Reading), the same type of pretest measure was used as a covariate (e.g., ITBS Total Reading).*

† The numbers shown in this row indicate the number of records that were used in the impact models.

Table III-18: Analysis of Sample Size for Two-Year Impact of *READ 180*—Seventh-Grade Students, Year 4

	TCAP		ITBS					
	Reading/LA		Total Reading		Comprehension		Vocabulary	
	Trt	Cnt	Trt	Cnt	Trt	Cnt	Trt	Cnt
Total in ITT Group	171	141	171	141	171	141	171	141
(A) Valid outcome measure obtained	171	141	155	127	155	127	156	128
Valid outcome measure not obtained:	0	0	16	14	16	14	15	13
Student left before TCAP/ITBS	0	0	0	0	0	0	0	0
Absent	0	0	0	0	0	0	0	0
Enrolled, but no TCAP/ITBS score	0	0	16	14	16	14	15	13
Non-consent	0	0	0	0	0	0	0	0
Unknown (Other reason)	0	0	0	0	0	0	0	0
(B) Valid pretest measure obtained*	171	141	153	134	166	137	154	134
Valid pretest measure not obtained:	0	0	18	7	5	4	17	7
Unknown	0	0	18	7	5	4	17	7
(C) Demographic Characteristics Obtained	171	141	171	141	171	141	171	141
Total with (A), (B), and (C)†	171	141	140	123	151	126	141	124

** For each outcome measure (e.g., ITBS Total Reading), the same type of pretest measure was used as a covariate (e.g., ITBS Total Reading).*

† The numbers shown in this row indicate the number of records that were used in the impact models.

Table III-19: Analysis of Sample Size for Two-Year Impact of *READ 180*— Seventh- and Eighth-Grade Students in Year 2 and Seventh-Grade Students in Years 3 and 4

	ITBS					
	Total Reading		Comprehension		Vocabulary	
	Trt	Cnt	Trt	Cnt	Trt	Cnt
Total in ITT Group	685	916	685	916	685	916
(A) Valid outcome measure obtained	606	776	596	783	608	798
Valid outcome measure not obtained:	89	140	89	133	77	118
Student left before TCAP/ITBS	0	0	0	0	0	0
Absent	0	0	0	0	0	0
Enrolled, but no TCAP/ITBS score	26	38	26	38	19	23
Non-consent	7	19	7	12	2	12
Unknown (Other reason)	41	71	41	71	41	71
(B) Valid pretest measure obtained*	627	854	640	860	633	859
Valid pretest measure not obtained:	58	60	45	54	52	55
Unknown	58	60	45	54	52	55
(C) Demographic Characteristics Obtained	685	916	685	916	685	916
Total with (A), (B), and (C)†	545	728	556	739	562	752

** For each outcome measure (e.g., ITBS Total Reading), the same type of pretest measure was used as a covariate (e.g., ITBS Total Reading).*

† The numbers shown in this row indicate the number of records that were used in the impact models. The current sample size is slightly smaller than the cumulative sample size of the past four years because students who were retained in grade have been removed from the current analyses.

IV. Evaluation of the Impacts of the Targeted Intervention: Years 1 through 4

This section includes descriptions of the study design, the student samples used, and the impacts of the targeted intervention—*READ 180*—on student outcomes. Each subsection includes information for all four years in chronological order.

Study Design

This subsection describes the design of the evaluation of the impacts in Years 1 through 4 of *READ 180* on the quantitative outcome measures, the TCAP and ITBS, described in Section II. It includes descriptions of the study design, the student samples used, and how the outcome data were collected. (Year 4 TCAP data were not released until January 2011, and analyses were not completed in time for this report. Spaces are left in the appropriate tables to add the data in a revised version of the report.)

Sample Selection

Year 1. At the beginning of Year 1, students who were struggling readers were identified in the sixth to eighth grades in each participating school. The intent was to randomly assign approximately 40 struggling readers in each grade in each school to receive *READ 180* services. Students scoring in the lowest quartile on the state reading test were considered struggling readers and were eligible to be assigned to either the treatment or the control group. Before random assignment, the participating schools were given the opportunity to opt students out of being eligible (e.g., due to parent objections, assignment to self-contained classrooms for special education services, or teacher judgments that TCAP scores were not representative of students' higher achievement levels).[8]

Struggling readers who were not opted out and who had not received *READ 180* services in the previous two school years were deemed eligible for random assignment to *READ 180*. Within each grade at each school, 40 students were randomly selected from this eligible pool to receive *READ 180* services. These 40 students were enrolled by the school in one of two or three *READ 180* classes in each grade. The students who were not randomly selected to receive *READ 180* services were assigned to the control group.

Due to significant variations in the way each school would or would not permit students receiving special education services to be assigned to *READ 180*, it was decided to base the *READ 180* impact analyses on treatment and control students not receiving special education services. Students assigned to either condition that were enrolled in a Striving Readers school for more than 50 percent of instructional days between fall and spring ITBS administration

[8] Most opt-outs occurred prior to random assignment. There were a few treatment group students who were opted out after random assignment. Since the control group counterparts for those students could not be identified, the treatment group students who were opted out after random assignment were retained in the treatment group for the ITT analyses.

constituted the intent-to-treat (ITT) group for the analyses of *READ 180* impact on student outcomes in Year 1. Table IV-1 describes the number of treatment, control, and non-eligible students enrolled in the eight MSRP schools at the time of random assignment (September 18, 2006).

Table IV-1: Numbers of Students Enrolled in Striving Reader Schools in Year 1 by *READ 180* Design Group

Grade	*READ 180* Treatment Group*	*READ 180* Control Group*	Non-Eligible Students	Total MSRP School Enrollment†
6	239	392	903	1,540
7	233	370	1,270	1,880
8	226	280	1,253	1,767
All	698	1,042	3,426	5,187

Data source: MCS enrollment files, 2006–2007
**These two groups constitute the ITT group (N = 1,740) for* READ 180 *one-year impact analyses in Year 1.*
†Enrollment as of 9/18/06

Years 2 through 4. At the beginning of each year, struggling readers were identified in sixth grade in each participating school. As in Year 1, the intent was to randomly assign approximately 40 struggling readers in sixth grade in each school to receive *READ 180* services. Before random assignment, the participating schools were again given the opportunity to opt out students from being eligible, and students who had received *READ 180* services in the previous two years also were excluded.

Within sixth grade at each school, between 30 and 40 students were randomly selected from this eligible pool to receive *READ 180* services.[9] These students were enrolled by the school in one of one to three *READ 180* classes in each grade. The students who were not randomly selected to receive *READ 180* services were assigned to the control group. (As in Year 1, students receiving special education services were excluded from the impact analyses.) These sixth-grade students in each year constitute the intent to treat (ITT) groups for the analyses of the impact of one year of *READ 180* on student outcomes in Years 2 through 4. Additionally, these sixth-grade students are included, along with all students who were included in the Year 1 ITT group, in the overall analysis of one-year impact on all students who received one year of treatment by the end of Year 4. Table IV-2 shows the number of treatment, control, and non-eligible sixth-grade students enrolled in the eight MSRP schools at the time of random assignment in Years 2, 3 and 4.

[9] Due to declining enrollments in several of the schools, it was not possible to assign 40 students to *READ 180* and still have a reasonable number of control students (at least half the number of *READ 180* students).

Table IV-2: Numbers of Sixth-Grade Students Enrolled in Striving Reader Schools in Years 2 through 4, by *READ 180* Design Group

Year	*READ 180* Treatment Group*	*READ 180* Control Group*	Non-Eligible Students	Total MSRP School Enrollment†
2	289	404	734	1,427
3	274	223	833	1,330
4	238	259	761	1,258

Data source: MCS enrollment files, 2007–2008, 2008–2009, and 2009–2010

**These pairs of groups constitute the ITT groups for* READ 180 *one-year impact analyses in Year 2 (N = 693), Year 3 (N = 497), and Year 4 (N = 497).*

†Enrollment as of 9/7/07 (Year 2), 8/28/08 (Year 3), and 8/28/09 (Year 4)

In order to evaluate the impact of two years of *READ 180* services, students from the Year 1 ITT analysis group who were enrolled in the seventh and eighth grades in a participating school more than 50 percent of instructional days between fall and spring ITBS administration in Year 2 were identified.[10] Similarly, students who were in the sixth-grade ITT analysis groups during Years 2 and 3 and were enrolled in a participating school in seventh grade for more than 50 percent of the instructional days between the fall and spring ITBS administrations during the following school year were identified. Table IV-3 describes the numbers of these students compared to the original number assigned to *READ 180* treatment and control. The rates of attrition, while substantially lower between Years 2 and 3 than between Years 1 and 2 or Years 3 and 4, are relatively consistent across experimental groups and grades.

Table IV-3: Numbers and Attrition Rates of Students in Two-Year Impact Analysis Groups, by Grade and Design Group

Grade During Year 1	During Year 2	During Year 3	During Year 4	Design Group	First year of study*	Second year of study†	Attrition Rate
6	7			*READ 180*	239	160	33%
6	7			Control	392	260	34%
7	8			*READ 180*	233	159	32%
7	8			Control	370	241	35%
	6	7		*READ 180*	289	251	13%
	6	7		Control	404	364	10%
		6	7	*READ 180*	274	171	38%
		6	7	Control	223	141	37%

Data sources: MCS enrollment files, 2006–2007, 2007–2008, 2008–2009, and 2009–2010

** Enrollment as of 9/18/06, 9/25/07, and 9/25/08, respectively*

† Enrollment as of 5/12/08, 5/6/09, and 5/6/10, respectively

[10] This identification process was consistent with an earlier procedural decision to include in the ITT analyses only those students who were enrolled in participating schools at the time of the spring administration of the ITBS.

Data Collection

As described in Section II, the measures of student outcomes for determining the impact of READ 180 on struggling readers are the ITBS and the TCAP. In Years 1 through 3, standard scores were used to measure reading comprehension, vocabulary, and total reading on the ITBS. These scores are vertically equated across grade levels, so students in higher grades achieve higher scores on average. In Year 4, NCEs were used. NCEs provide an equal interval scale similar to standard scores, but they are not vertically equated. Instead, they represent achievement relative to students in the same grade. NCEs between 1 and 50 represent below-grade average achievement levels and NCEs between 50 and 99 represent above-grade average achievement levels. The reported internal consistency measures of reliability for these three scores for test levels administered to students in sixth through eight grades are high: 0.87–0.88 for vocabulary, 0.90–0.92 for comprehension, and 0.94 for total reading.11 Scale scores were used to measure student achievement in reading/language arts, mathematics, science, and social studies on the TCAP. The reading/language arts and mathematics scale scores are vertically equated. However, the science and social studies scale scores are not (the distribution of scores in sixth through eighth grades have similar means and standard deviations). Efforts to obtain information on the psychometric properties of the TCAP were unsuccessful.

The ITBS was administered twice in Year 1—during the week beginning September 18, 2006, and during the week beginning April 30, 2007—by classroom teachers to all students in the MSRP schools, except those in self-contained special education classrooms and a very small number whose parents did not consent to the student's participation in the testing. The spring 2007 test scores measured treatment and control student reading achievement levels at the end of Year 1. The fall 2006 test scores were used to control for random differences in reading achievement levels between treatment and control students at the beginning of the year, as well as reduce the within-school error variance in the spring 2007 test scores.

The ITBS was also administered twice in Year 2—during the weeks beginning September 17, 2007, and May 12, 2008—by classroom teachers in MSRP schools. The fall administration was only for sixth-grade students; all students in MSRP schools took the spring administration. The spring 2008 test scores measured treatment and control student reading achievement levels at the end of Year 2. The fall 2007 test scores were used as a control variable for analyses of the impact of one year of *READ 180* on the Year 2 achievement of sixth-grade students. The fall 2006 test scores were used as control variables for analyses of the impact of two years of *READ 180* on the Year 2 achievement of seventh- and eighth-grade students.

The ITBS again was administered twice in Year 3—during the weeks beginning September 8, 2008, and May 4, 2009—by classroom teachers in MSRP schools. As in Year 2, the fall administration was only for sixth-grade students; all students in MSRP schools took the spring administration. The spring 2009 test scores measured treatment and control student reading achievement levels at the end of Year 3. The fall 2008 test scores were used as a control variable for analyses of the impact of one year of *READ 180* on Year 3 achievement of sixth-grade

[11] See the ITBS Guide to Research and Development (2003), pp. 71-73.

students. The fall 2007 test scores were used as control variables for analyses of the impact of two years of *READ 180* on the Year 3 achievement of seventh-grade students.

The ITBS again was administered twice in Year 4—during the weeks beginning September 14, 2009, and May 3, 2010—by classroom teachers in MSRP schools. As in Year 3, the fall administration was only for sixth-grade students; all students in MSRP schools took the spring administration. The spring 2010 test scores measured treatment and control student reading achievement levels at the end of Year 4. The fall 2009 test scores were used as a control variable for analyses of the impact of one year of *READ 180* on Year 4 achievement of sixth-grade students. The fall 2008 test scores were used as a control variable for analyses of the impact of two years of *READ 180* on the Year 4 achievement of seventh-grade students.

The TCAP is administered by MCS for the state in or about the first week in April each year. The spring 2007 test scores measured treatment and control student achievement levels in the four core content areas at the end of Year 1. The spring 2006 scores in the same content area were used to control for random treatment-control differences and reduce within-school error variance in spring 2007 scores. The spring 2007, spring 2008, and spring 2009 test scores, respectively, were used as control variables for analyses of the impact of one year of *READ 180* on the Year 2, Year 3, and Year 4 achievement of sixth-grade students. The spring 2006 test scores were used as a control variable for analyses of the impact of two years of *READ 180* on the Year 2 achievement of seventh- and eighth-grade students. The spring 2007 test scores were used as a control variable for analyses of the impact of two years of *READ 180* on the Year 3 achievement for seventh-grade students. The spring 2008 test scores were used as a control variable for analyses of the impact of two years of *READ 180* on the Year 4 achievement for seventh-grade students.

Data Analysis

ITT impact analyses of student achievement in reading and the four core content areas were conducted to assess the effects of one year of *READ 180* on student outcomes for the 1,740 eligible struggling readers in the sixth, seventh, and eighth grades in Year 1. Also, to investigate any suggestions of interactions of *READ 180* impact and grade level, separate analyses were conducted for students in the sixth, seventh, and eighth grades. Separate analyses of the 693 eligible sixth-grade students in Year 2, the 497 in Year 3, and the 497 in Year 4 were conducted to determine whether the impact of one year of *READ 180* varied in Years 1 through 4. Finally, analyses of all ITT samples combined from all grades in Year 1 and sixth grade in Years 2 through 4 were conducted to obtain an overall impact of one year of *READ 180*.

Similar analyses were conducted to assess the effects of participating in *READ 180* for two years on student achievement at the end of Year 2 for the remaining 820 ITT students in the seventh and eighth grades, at the end of Year 3 for the remaining 615 ITT students in seventh grade, and at the end of Year 4 for the remaining 312 ITT students in seventh grade. Separate analyses were conducted for the ITT students receiving two years of *READ 180* in each year and a combined analysis for the 1747 students in all three years.

Multi-level regression analysis models were used to estimate and test the statistical significance of the difference between the achievement of students receiving *READ 180* and the control group. Two-level models were employed for the Year 1 analyses that express the spring ITBS and TCAP scores as a function of student and school variables.[12] The spring 2007 ITBS and TCAP scores were the dependent variables. The 2006 ITBS and TCAP scores—representing the same test or subject as the dependent variable—were included as the principal student-level covariate. Other control variables at the student and school levels were tested for inclusion as covariates in these analyses. The *READ 180* treatment variable was included at the student level of these models.

Similar two-level models were employed for the cross-sectional analyses of student achievement at the end of Years 2, 3, and 4. The only differences were the use of spring 2008 (Year 2) or 2009 (Year 3) or 2010 (Year 4) ITBS and TCAP[13] test scores as the dependent variables and, for the sixth-grade students, the use of fall 2007 (Year 2) or 2008 (Year 3) or 2009 (Year 4) ITBS and spring 2007 (Year 2), spring 2008 (Year 3), or spring 2009 (Year 4) TCAP test scores as one of the student covariates. The complete specification of the multi-level regression models employed to determine the one- and two-year impacts of the *READ 180* intervention is provided in Appendix D.

Table IV-4 summarizes the dependent and independent variables and the covariates included in these analyses.

Selection of Covariates

There are different approaches to including and/or excluding covariates in multi-level regression, as there are in single-level regression analyses. The approach that was used in these analyses was to (1) include all student- and school-level covariates in the model, (2) run the model, (3) eliminate the school covariate with the lowest significance level (highest *p*-value) not less than 0.2, (4) repeat steps two and three until the remaining covariates had *p*-values less than 0.2, and (5) repeat steps two to four for the student covariates.

Treatment of Missing Data

The only variables in these analyses that contained missing data were the ITBS and TCAP scores. The number of students for whom test scores were missing in any analysis was small relative to the total number of students; therefore, simply omitting these students would not significantly compromise the power of these analyses. Thus, procedures for imputing missing values were not employed. The amount of attrition due to missing test scores and possible differential attrition between treatment and control groups were studied. The results of this study are presented in the discussion of the results of the *READ 180* impact analyses below.

[12] Three-level models employing school, teacher, and student variables were explored. These analyses proved to be relatively complex and equivocal due to each student's having different teachers for the core content areas and significant amounts of missing teacher data. Also, the results did not vary noticeably from the results of the two-level models. The evaluation team decided to omit three-level models from future impact analyses.

[13] Spring 2010 TCAP results were made available in January 2011. These results will be included in the revised version of this report.

Table IV-4: All Variables Included in *READ 180* Impact Analytical Models for Years 1 through 4

Variable	Level	Coding / Range
Dependent		
Spring 2007/2008/2009/2010 ITBS Total Reading*	Student	Standard Score 100–350
Spring 2007/2008/2009/2010 ITBS Comprehension*	Student	Standard Score 100–350
Spring 2007/2008/2009/2010 ITBS Vocabulary*	Student	Standard Score 100–350
Spring 2007/2008/2009/2010 TCAP Reading/LA*	Student	Scale Score 300–750
Spring 2007/2008/2009/2010 TCAP Mathematics*	Student	Scale Score 300–750
Spring 2007/2008/2009/2010 TCAP Science*	Student	Scale Score 100–300
Spring 2007/2008/2009/2010 TCAP Social Studies*	Student	Scale Score 100–300
Independent		
READ 180 Participation	Student	Yes = 1; No = 0
Covariates		
Fall 2006/2007/2008/2009 ITBS Total Reading†	Student	Standard Score 100–350
Fall 2006/2007/2008/2009 ITBS Comprehension†	Student	Standard Score 100–350
Fall 2006/2007/2008/2009 ITBS Vocabulary†	Student	Standard Score 100–350
Spring 2006/2007/2008/2009 TCAP Reading/LA†	Student	Scale Score 300–750
Spring 2006/2007/2008/2009 TCAP Mathematics†	Student	Scale Score 300–750
Spring 2006/2007/2008/2009 TCAP Science†	Student	Scale Score 100–300
Spring 2006/2007/2008/2009 TCAP Social Studies†	Student	Scale Score 100–300
Gender	Student	Female = 1; Male = 0
African American	Student	Yes = 1; No = 0
Hispanic	Student	Yes = 1; No = 0
Free/Reduced Lunch (Fall 2006/2007/2008/2009)†	Student	Yes = 1; No = 0
English Language Learner (Fall 2006/2007/2008/2009)†	Student	Yes = 1; No = 0
Enrolled in Grade 7 in Year 1	Student	Yes = 1; No = 0
Enrolled in Grade 8 in Year 1/Year 2	Student	Yes = 1; No = 0
Percentage Female (Fall 2006)	School	0–100
Percentage African American (Fall 2006)	School	0–100
Percentage Special Ed (Fall 2006)	School	0–100
Percentage FRL‡ (Fall 2006)	School	0–100
Percentage ELL§ (Fall 2006)	School	0–100
School Enrollment (Fall 2006)	School	400–1200

Data sources: ITBS and TCAP files, school enrollment and demographic data files, and READ 180 random assignment files, 2006 through 2010

**Second through fourth dates apply for analyses in Years 2 through 4.*

†*Second through fourth dates apply for analyses of sixth-grade students in Years 2 through 4.*

‡*Students receiving free or reduced-priced meals*

§*English Language Learners*

Description of the Samples of Students for READ 180 Impact Analyses in Years 1 through 4

Equivalence on Student Demographic Characteristics

Year 1. As described above, 1,740 eligible struggling readers were randomly assigned to the *READ 180* treatment or control groups in Year 1 of the MSRP study. The grade level and other demographic characteristics of these students are presented in Table IV-5.

Table IV-5: Significant Differences in Demographic Characteristics of Analytic Groups

Student Characteristic	Control		*READ 180*		Sig. Level	Total	
Year 1, All Grades Sample							
Enrolled in Grade 6	392	37.6%	239	34.2%	0.05	631	36.3%
Enrolled in Grade 7	370	35.5%	233	33.4%		603	34.7%
Enrolled in Grade 8	280	26.9%	226	32.4%		506	29.1%
African American	955	91.6%	657	94.1%	0.05	1612	92.6%
Hispanic	86	8.2%	40	5.7%	0.05	126	7.2%
English Language Learner	83	8.0%	34	4.9%	0.01	117	6.7%
Year 2, Sixth-Grade Sample							
Female	169	41.8%	143	49.5%	0.05	312	45.0%
Male	235	58.2%	146	50.5%		381	55.0%
Year 3, Sixth Grade Sample							
African American	204	91.5%	265	96.7%	0.01	469	94.4%
Hispanic	18	8.1%	9	3.3%	0.02	27	5.4%
English Language Learner	16	7.2%	7	2.6%	0.02	23	4.6%
Year 4, Sixth Grade Sample							
African-American	241	93.1%	232	97.5%	0.02	473	95.2%
Hispanic	18	6.9%	6	2.5%	0.02	24	4.8%
English Language Learner	20	7.7%	6	2.5%	0.01	26	5.2%
Years 1–4, Sixth Grade (only) Sample							
African-American	1174	92.9%	992	95.9%	0.00	2166	94.3%
Hispanic	88	7.0%	41	4.0%	0.00	129	5.6%
English Language Learner	81	6.4%	35	3.4%	0.00	116	5.0%
Years 1–4; All Students with One Year of Treatment							
African-American	1768	92.4%	1422	95.2%	0.00	3190	93.6%
Hispanic	143	7.5%	70	4.7%	0.00	213	6.3%
English Language Learner	136	7.1%	61	4.1%	0.00	197	5.8%
Years 1–4; All Students with Two Years of Treatment ("Stayers") Sample							
English Language Learner	66	7.2%	33	4.8%	0.05	99	6.2%

Data sources: MCS enrollment files, 2006–2007, 2007–2008, 2008–2009, and 2009–2010; Grade 6 SR Students in Yr 4 R180 Impact Analyses.sav; Grade 6 SR Students in Yr 1 2 3 and 4 R180 Impact Analyses.sav; All Students in Grade 6 for Yrs 1+2+3+4 and Grade 7 and 8 for Yr 1 Analyses of One Year Impact.sav; Grade 7 Students in Yr 4 Impact Analyses - Stayers.sav; and All Students for Yrs 2+3+4 R180 Analyses of Two Year Impact

Notes: Numbers in parentheses are the numbers of students in each group who have valid test scores. The current sample size is slightly smaller than the cumulative sample size of the past four years because students who were retained in grade have been removed from the current analyses.

The number of students decreases as the enrollment grade increases, and this difference is reflected more strongly in the control group since approximately equal numbers were randomly assigned to the treatment group in each grade. These differences in grade enrollment between treatment and control groups emphasize the importance of treating the student's enrollment grade as a covariate in the analyses of *READ 180* impact for students from more than one grade. Also, all but two students were either African American or Hispanic, which supported the creation of two dichotomous covariates to represent membership in these two race/ethnicity groups. Finally, the differences in demographic composition of the treatment and control groups were relatively minor, although some were statistically significant given the large number of students overall. Including these characteristics as student-level covariates in the analytical models helps to control for these small differences, as well as reduce the within-school error variance in the dependent variables. Tables detailing comparisons of all of the demographic characteristics in all years are included as Appendix E.

Equivalence on Baseline Achievement

With random assignment, the baseline scores of students in treatment and control groups should be very similar on all seven tests. To determine whether this was true, researchers compared the baseline achievement of treatment and control groups for all students in Year 1 and, in subsequent years, for incoming sixth graders. Specifically, comparisons between treatment and control groups on the baseline 2006 ITBS and TCAP test scores were carried out for the 1,740 students in the Year 1 ITT sample and the 820 Year 2 "stayers." Treatment and control comparisons were made on the baseline 2007 ITBS and TCAP test scores for the Year 2 sixth-grade ITT sample, on the baseline 2008 ITBS and TCAP test scores for the Year 3 sixth-grade ITT sample, and on the baseline 2009 ITBS and TCAP test scores for the Year 4 sixth-grade ITT sample. Analyses confirmed that while there were slight differences between groups on the different tests in different years, there were statistically significant differences between the groups only in Year 2. Table IV-6 shows these differences and their significance levels. Tables detailing all of the scores and differences, for all seven tests in all four years, together with their significance levels, are included as Appendix F.

Table IV-6: Significant Differences in Baseline Achievement Scores of Analytic Sample Groups

Year 2, Sixth-Grade Students	Means				
Test Score	Control		*READ 180*		Sig. Level
ITBS Total Reading Standard Score	184.9	(364)	182.0	(247)	0.007
ITBS Comprehension Standard Score	182.8	(365)	179.7	(247)	0.014
TCAP Reading/LA Scale Score	487.8	(403)	482.4	(289)	0.004

Data sources: ITBS and TCAP, 2007
Note: Numbers in parentheses are the numbers of students in each group who have valid test scores.

Impact of Participation in READ 180 *for One Year on Student Achievement in Years 1 through 4*

One-Year Impact of *READ 180* on Students in Sixth through Eighth Grades Combined in Year 1

The multi-level regression model described in Appendix D was used to estimate the one-year impact of *READ 180* on the reading and content area achievement of the 1,740 eligible struggling readers in the Year 1 *READ 180* ITT sample. Table IV-7 summarizes the results of these analyses for student reading achievement measured by the ITBS and student achievement in the four core content areas measured by the TCAP. (The complete results of the multi-level analyses of the *READ 180* impact on these seven test scores can be found in Appendix G in Tables G-1–G-7.)

Table IV-7 displays several statistical parameters. The **unadjusted means** show the actual mean 2007 test scores for the treatment and control groups. The numbers in parentheses at the bottom of these cells is the number of students in the respective group with a valid test score. The **adjusted means** are the average scores controlling for all covariates retained in the analytical model—the variable indicating treatment/control group membership and all "significant" covariates ($p < 0.2$). The **estimated impact** is the difference between the treatment and control group adjusted means (treatment minus control). A positive impact means the *READ 180* treatment group averaged higher achievement on the particular test than the control group, controlling for covariates included in the final analytical model (see Appendix G, Tables G-1–G-7). A negative impact means the control group averaged higher than the treatment group. The **significance level** and **effect size** are two indicators of the importance of the estimated difference. Conventionally, a significance level less than 0.05 is an acceptable indication that the estimated difference is not due to chance, i.e., that it is "statistically significant." Conventionally, an effect size between 0.2 and 0.5 is considered small, between 0.5 and 0.8 is medium, and greater than 0.8 is large.

The estimated *READ 180* impacts for all seven test scores are quite small—less than one standard/scale score unit. None is statistically significant ($p < 0.05$); and all effect sizes are quite small. There is no reason, therefore, to reject the hypothesis that the average achievement of the treatment and control groups was the same at the end of Year 1. In other words, participation in *READ 180* did not have a significant impact on student achievement levels in reading or in the four core content areas at the end of the first year of the study.

Table IV-7: One-Year Impact of *READ 180* in Year 1 on Spring 2007 Scores on Each Achievement Test—Sixth- through Eighth-Grade Students

	Unadjusted Means		Adjusted Means		Est. Impact	Effect Size*	Signif. Level
Test Score	**Control**	***READ 180***	**Control**	***READ 180***			
ITBS Total Reading Standard Score	191.8 (712)†	192.9 (511)	192.6	192.1	-0.5	-0.03	0.532
ITBS Comprehension Standard Score	186.7 (718)	187.6 (517)	187.0	187.0	0.0	0.00	0.976
ITBS Vocabulary Standard Score	197.0 (726)	198.3 (519)	197.5	197.6	0.1	0.01	0.937
TCAP Reading/LA Scale Score	495.8 (972)	498.0 (664)	496.9	497.1	0.2	0.01	0.882
TCAP Mathematics Scale Score	500.0 (971)	501.8 (661)	500.0	500.2	0.2	0.01	0.904
TCAP Science Scale Score	185.1 (915)	185.6 (643)	185.6	185.1	-0.5	-0.03	0.573
TCAP Social Studies Scale Score	185.1 (906)	186.1 (644)	185.0	185.8	0.8	0.05	0.323

Data sources: ITBS and TCAP, 2006–2007

**The method used to calculate effect size was Glass' Δ, the difference between treatment and control groups' adjusted mean test scores divided by the control group's test score standard deviation.*

†Numbers in parentheses are the numbers of students in each group having valid test scores from the baseline 2006 administrations and the spring 2007 administrations.

One-Year Impact of *READ 180* on Students in Each Grade in Year 1

The analyses of *READ 180* impact reported above were based on the total ITT sample of students in sixth through eighth grades. The same analyses were also carried out separately for students in each of these three grades. In the Year 4 report, Year 1 sixth-grade results can be compared with results for sixth graders in the Years 2–4 to see if there are any changes over time in the impact of *READ 180*. The results for seventh- and eighth-grade students in Year 1 allow a comparison of the impact of this targeted intervention across grades. The calculation of the one-year impact of *READ 180* for seventh- and eighth-grade students in Years 2 through 4 is not relevant due to their previous participation in *READ 180*. Table IV-8 presents the results of the analyses of the one-year impact of *READ 180* on sixth-grade students.

Table IV-8: One-Year Impact of *READ 180* in Year 1 on Spring 2007 Scores on Each Achievement Test—Sixth-Grade Students

Test Score	Unadjusted Means		Adjusted Means		Est. Impact	Effect Size*	Signif. Level
	Control	*READ 180*	Control	*READ 180*			
ITBS Total Reading Standard Score	183.3 (287)†	184.9 (178)	183.8	184.3	0.5	0.04	0.665
ITBS Comprehension Standard Score	179.7 (288)	180.0 (179)	180.3	186.9	-1.0	-0.07	0.441
ITBS Vocabulary Standard Score	187.1 (290)	190.0 (180)	186.8	189.5	2.7	0.17	0.056
TCAP Reading/LA Scale Score	487.9 (372)	489.6 (228)	488.9	488.9	0.0	0.00	0.996
TCAP Mathematics Scale Score	494.4 (372)	494.9 (227)	492.3	494.7	2.4	0.08	0.279
TCAP Science Scale Score	185.9 (352)	187.9 (221)	186.6	187.6	1.0	0.07	0.423
TCAP Social Studies Scale Score	186.0 (349)	187.2 (222)	186.7	187.5	0.8	0.04	0.615

Data sources: ITBS and TCAP, 2007

**The method used to calculate effect size was Glass' Δ, the difference between treatment and control groups' adjusted mean test scores divided by the control group's test score standard deviation.*

†Numbers in parentheses are the numbers of students in each group having valid test scores from the baseline 2006 administrations and the spring 2007 administrations.

The estimated *READ 180* impacts in the sixth grade in Year 1 were not as small as they were for all grades. The impacts on the ITBS vocabulary subtest and TCAP mathematics were greater than two standard/scale score units. Again, however, none of the impacts are statistically significant ($p < 0.05$), although the impact on ITBS vocabulary approaches this level and the associated effect size, 0.17, is close to the small range of 0.2–0.5. Overall for sixth grade, there is no reason to reject the hypothesis that the average achievement of the treatment and control groups was the same at the end of Year 1. Participation in *READ 180* did not have a significant impact on student achievement levels in reading or in the four core content areas in the sixth grade in Year 1.

Similar analyses carried out for seventh- and eighth-grade students yielded non-significant estimated impacts with effect sizes under 0.2. The complete results of the multi-level analyses of the Year 1 *READ 180* impact on these seven test scores for each grade can be found in Appendix G in Tables G-8–G-28.

One-Year Impact of *READ 180* on Sixth-Grade Students in Year 2

The one-year impact of *READ 180* on ITBS and TCAP test scores for sixth-grade students in Year 2 was determined using the same multi-level model (see Appendix D) for the 693 sixth-grade students in the Year 2 ITT sample. The only differences were that the dependent variables were the 2008 ITBS and TCAP test scores and the respective test score covariate was from the 2007 administrations. The results of these analyses are summarized in Table IV-9. The

complete results of the multi-level analyses of the Year 2 *READ 180* impact on these seven test scores for sixth grade can be found in Appendix G in Tables G-29–G-35.

The estimated *READ 180* impacts in the sixth grade in Year 2 were of a similar size as they were in Year 1. There were more negative impacts favoring the control group. However, even the largest estimated impact, for TCAP mathematics, was not statistically significant ($p < 0.05$). Overall for sixth grade, there is no reason to reject the hypothesis that the average achievement of the treatment and control groups was the same at the end of Year 2. Participation in *READ 180* did not have a significant impact on student achievement levels in reading or in the four core content areas in the sixth grade in Year 2.

Table IV-9: One-Year Impact of *READ 180* in Year 2 on Spring 2008 Scores on Each Achievement Test–Sixth-Grade Students

Test Score	Unadjusted Means		Adjusted Means		Est. Impact	Effect Size*	Signif. Level
	Control	*READ 180*	Control	*READ 180*			
ITBS Total Reading Standard Score	185.4 (295)†	182.9 (204)	184.4	183.7	-0.7	-0.06	0.468
ITBS Comprehension Standard Score	182.3 (299)	179.4 (204)	181.8	180.0	-1.8	-0.12	0.170
ITBS Vocabulary Standard Score	185.5 (299)	186.3 (210)	187.4	186.8	-0.6	-0.04	0.639
TCAP Reading/LA Scale Score	497.1 (390)	495.6 (278)	494.7	496.5	1.9	0.06	0.407
TCAP Mathematics Scale Score	499.2 (390)	495.6 (278)	500.0	495.8	-4.2	-0.15	0.070
TCAP Science Scale Score	187.0 (387)	185.9 (272)	186.5	186.3	-0.2	-0.01	0.876
TCAP Social Studies Scale Score	186.7 (380)	182.8 (272)	185.8	183.5	-2.3	-0.15	0.087

Data sources: ITBS and TCAP, 2007–2008

**The method used to calculate effect size was Glass' Δ, the difference between treatment and control groups' adjusted mean test scores divided by the control group's test score standard deviation.*

†Numbers in parentheses are the numbers of students in each group having valid test scores from the baseline 2007 administrations and the spring 2008 administrations.

One-Year Impact of *READ 180* on Sixth-Grade Students in Year 3

The one-year impact of *READ 180* on ITBS and TCAP test scores of sixth-grade students in Year 3 was determined using the same multi-level model (see Appendix D) for the 497 sixth-grade students in the Year 3 ITT sample. The only differences were that the dependent variables were the 2009 ITBS and TCAP test scores and the respective test score covariate was from the 2008 administrations. The results of these analyses are summarized in Table IV-10. The complete results of the multi-level analyses of the Year 3 *READ 180* impact on these seven test scores for sixth-grade students can be found in Appendix G in Tables G-36–G-42.

The estimated *READ 180* impacts in the sixth grade in Year 3 were, with one exception, of a similar size as in Years 1 and 2. The impact on TCAP Reading/LA scale scores was larger, favoring the *READ 180* group, and statistically significant ($p < 0.05$). The effect size was in the

small range, however, and there appears to be an unusually large adjustment downward of the control group mean (from 479.5 to 473.8). Although no explanation for this uncharacteristically large adjustment could be found, one should use caution in interpreting this significant impact. The other six impacts favored the control group and were not statistically significant. With the one tentative exception, there is again no reason to reject the hypothesis that the average achievement of the sixth grade treatment and control groups was the same at the end of Year 3.

Table IV-10: One-Year Impact of *READ 180* in Year 3 on Spring 2009 Scores on Each Achievement Test–Sixth-Grade Students

Test Score	Unadjusted Means		Adjusted Means		Est. Impact	Effect Size*	Signif. Level
	Control	*READ 180*	Control	*READ 180*			
ITBS Total Reading Standard Score	184.4 (176)†	182.5 (204)	184.2	182.2	-2.0	-0.18	0.081
ITBS Comprehension Standard Score	179.5 (187)	178.5 (225)	179.6	178.2	-1.4	-0.09	0.314
ITBS Vocabulary Standard Score	189.2 (176)	186.8 (205)	188.9	186.6	-2.3	-0.16	0.111
TCAP Reading/LA Scale Score	479.5 (216)	480.6 (269)	473.8	480.7	6.9	0.21	0.030
TCAP Mathematics Scale Score	490.8 (216)	488.1 (269)	491.7	488.5	-3.2	-0.11	0.215
TCAP Science Scale Score	183.9 (215)	182.3 (268)	183.3	182.4	-0.9	-0.06	0.550
TCAP Social Studies Scale Score	185.0 (213)	183.3 (268)	183.6	183.0	-0.6	-0.04	0.714

Data sources: ITBS and TCAP, 2008–2009

**The method used to calculate effect size was Glass' Δ, the difference between treatment and control groups' adjusted mean test scores divided by the control group's test score standard deviation.*

†Numbers in parentheses are the numbers of students in each group having valid test scores from the baseline 2008 administrations and the spring 2009 administrations.

One-Year Impact of *READ 180* on Sixth-Grade Students in Year 4

The one-year impact of *READ 180* on ITBS and TCAP[14] test scores of sixth-grade students in Year 4 was determined using the same multi-level model (see Appendix D) for the 497 sixth-grade students in the Year 4 ITT sample. The only differences were that the dependent variables were the 2010 ITBS and TCAP test scores and the respective test score covariate was from the 2009 administrations. Also, analyses were conducted in NCEs in Year 4 to facilitate cross-site analyses by the Striving Reader Evaluation Technical Assistance contractor. The results of these analyses are summarized in Table IV-11. The complete results of the multi-level analyses of the Year 4 *READ 180* impact on the three ITBS test scores for sixth-grade students can be found in Appendix G in Tables G-43–G-45.

[14] Because of substantive changes in the TCAP between Years 3 and 4, and because there were no significant impacts on TCAP Reading/LA or ITBS scores in Year 3, researchers analyzed only the TCAP Reading/LA scores in Year 4.

The estimated *READ 180* impacts in the sixth grade in Year 4 on ITBS NCE scores were not statistically significant ($p < 0.05$). Effect sizes were all smaller than 0.20 (in absolute value). There is again no reason to reject the hypothesis that the average achievement of the sixth grade treatment and control groups was the same at the end of Year 4.

Table IV-11: One-Year Impact of *READ 180* in Year 4 on Spring 2010 Scores on Each Achievement Test–Sixth-Grade Students

Test Score	Unadjusted Means		Adjusted Means		Est. Impact	Effect Size*	Signif. Level
	Control	*READ 180*	Control	*READ 180*			
ITBS Total Reading NCE	19.7 (208)†	19.3 (174)	18.8	19.3	0.5	0.05	0.621
ITBS Comprehension NCE	21.7 (208)	22.9 (176)	21.1	23.1	2.0	0.17	0.089
ITBS Vocabulary NCE	22.2 (209)	20.3 (174)	21.1	20.5	-0.6	-0.05	0.583
TCAP Reading/LA Scale Score	704.01 (234)	701.82 (211)	703.4	701.5	-1.9	-0.07	0.433

Data sources: ITBS and TCAP, 2009–2010

**The method used to calculate effect size was Glass' Δ, the difference between treatment and control groups' adjusted mean test scores divided by the control group's test score standard deviation.*

†Numbers in parentheses are the numbers of students in each group having valid test scores from the baseline 2009 administrations and the spring 2010 administrations.

One-Year Impact of *READ 180* on Sixth-Grade Students, Years 1–4 Combined

The one-year impact of *READ 180* on ITBS and TCAP[15] test scores of sixth-grade students in Years 1 through 4 was determined using the same multi-level model (see Appendix D) for the 2298 sixth-grade students in the combined four ITT samples. The dependent variables were the 2007–2010 ITBS and TCAP test scores and the respective test score covariate was from the 2006–2009 administrations. Also, analyses were conducted in NCEs to facilitate cross-site analyses by the Striving Reader Evaluation Technical Assistance contractor. The results of these analyses are summarized in Table IV-12. The complete results of the multi-level analyses of the *READ 180* impact on the three ITBS test scores for sixth-grade students in Years 1–4 can be found in Appendix G in Tables G-46–G-48.

The estimated *READ 180* impacts in the sixth grade across Years 1 through 4 on ITBS NCE scores were not statistically significant ($p < 0.05$). Effect sizes were all very small. There is no reason to reject the hypothesis that the average achievement of the sixth grade treatment and control groups was the same for all four ITT samples combined.

[15] Because analyses of one year of treatment showed no significant differences between treatment and control groups on the TCAP Reading/LA test in Years 1, 2, 3, or 4, researchers determined that a combined analysis of TCAP Reading/LA scores was not warranted.

Table IV-12: One-Year Impact of *READ 180* in Years 1–4 on Spring 2007–2010 Scores on Each Achievement Test–Sixth-Grade Students

Test Score	Unadjusted Means		Adjusted Means		Est. Impact	Effect Size*	Signif. Level
	Control	*READ 180*	Control	*READ 180*			
ITBS Total Reading NCE	19.9 (959)†	19.0 (757)	19.4	19.1	-0.3	-0.03	0.530
ITBS Comprehension NCE	22.4 (975)	22.0 (781)	22.1	22.0	-0.1	-0.01	0.814
ITBS Vocabulary NCE	21.7 (967)	21.0 (766)	21.0	21.0	0.0	0.00	0.975

Data sources: ITBS and TCAP, 2007–2010

**The method used to calculate effect size was Glass' Δ, the difference between treatment and control groups' adjusted mean test scores divided by the control group's test score standard deviation.*

†Numbers in parentheses are the numbers of students in each group having valid test scores from the baseline 2006–2009 administrations and the spring 2007–2010 administrations.

Note: The current sample size is slightly smaller than the cumulative sample size of the past four years because students who were retained in grade have been removed from the current analyses.

One-Year Impact of *READ 180* on Sixth-Grade Students in Years 1–4 plus Seventh and Eighth Grades in Year 1

The one-year impact of *READ 180* on ITBS[16] test scores of all students in all four years of the study who had completed one year of *READ 180* (sixth-grade students in Years 1 through 4 and seventh- and eighth-grade students in Year 1) was determined using the same multi-level model (see Appendix D) for the 3,407 students in the combined six ITT samples. The dependent variables were the 2007–2010 ITBS and TCAP test scores, and the respective test score covariate was from the 2006–2009 administrations. Also, analyses were conducted in NCEs to facilitate cross-site analyses by the Striving Reader Evaluation Technical Assistance contractor. The results of these analyses are summarized in Table IV-13. The complete results of the multi-level analyses of the one-year *READ 180* impact on the three ITBS test scores for all students randomly assigned to treatment or control can be found in Appendix G in Tables G-49–G-51.

The estimated *READ 180* one-year impacts on all students in the combined six ITT samples from Years 1–4 on ITBS NCE scores were not statistically significant ($p < 0.05$). Effect sizes were very small. There is no reason to reject the hypothesis that the average achievement of the treatment and control groups after the treatment group received one year of *READ 180* was the same.

[16] Because analyses of one year of treatment showed no significant differences between treatment and control groups on the TCAP Reading/LA test in Years 1, 2, 3, or 4, researchers determined that a combined analysis of TCAP Reading/LA scores was not warranted.

Table IV-13: One-Year Impact of *READ 180* in Years 1–4 on Spring 2007–2010 Scores on Each Achievement Test—All Students in Year 1 and Sixth-Grade Students in Years 2–4

Test Score	Unadjusted Means		Adjusted Means		Est. Impact	Effect Size*	Signif. Level
	Control	*READ 180*	Control	*READ 180*			
ITBS Total Reading NCE	20.5 (1384)†	19.7 (1090)	20.1	19.7	-0.4	-0.04	0.322
ITBS Comprehension NCE	22.9 (1405)	22.5 (1119)	22.6	22.5	-0.1	-0.01	0.790
ITBS Vocabulary NCE	22.4 (1403)	21.6 (1105)	21.8	21.6	-0.2	-0.02	0.590

Data sources: ITBS and TCAP, 2007–2010

**The method used to calculate effect size was Glass' Δ, the difference between treatment and control groups' adjusted mean test scores divided by the control group's test score standard deviation.*

†Numbers in parentheses are the numbers of students in each group having valid test scores from the baseline 2006–2009 administrations and the spring 2007–2010 administrations.

Note: The current sample size is slightly smaller than the cumulative sample size of the past four years because students who were retained in grade have been removed from the current analyses.

Impact of Participation in READ 180 *for Two Years on Student Achievement in Years 2 through 4*

Two-Year Impact of *READ 180* on Seventh- and Eighth-Grade Students in Year 2

In order to determine the impact of participating in *READ 180* for two years at the end of Year 2, a two-level model similar to the model described in Appendix D was used to estimate the difference between treatment and control students on spring 2008 ITBS and TCAP test scores, controlling for their 2006 baseline scores, along with other student-level covariates. Since the students in these analyses were the 820 "stayers" in the seventh and eighth grades in Year 2, only one dummy variable indicating which students were in eighth grade was employed to control for within-school differences attributable to the student's grade level. The school-level covariates remained the same. Table IV-14 presents the results of these analyses of the two-year impact of *READ 180*. The complete results of the multi-level analyses of the two-year *READ 180* impact in Year 2 on these seven test scores for seventh- and eighth-grade students can be found in Appendix G in Tables G-52–G-58.

Table IV-14: Two-Year Impact of *READ 180* in Year 2 on Spring 2008 Scores on Each Achievement Test—Seventh- and Eighth-Grade Students Combined

Test Score	Unadjusted Means		Adjusted Means		Est. Impact	Effect Size*	Signif. Level
	Control	*READ 180*	Control	*READ 180*			
ITBS Total Reading Standard Score	197.9 (398)†	198.4 (262)	198.0	198.1	0.1	0.01	0.967
ITBS Comprehension Standard Score	193.5 (405)	193.3 (260)	193.7	193.0	-0.7	-0.03	0.639
ITBS Vocabulary Standard Score	201.8 (407)	203.3 (266)	201.5	203.3	1.8	0.08	0.280
TCAP Reading/LA Scale Score	505.8 (498)	507.5 (316)	505.3	506.7	1.4	0.05	0.446
TCAP Mathematics Scale Score	511.0 (498)	512.3 (315)	511.9	511.5	-0.4	-0.01	0.871
TCAP Science Scale Score	184.0 (478)	185.0 (312)	184.4	184.7	0.3	0.02	0.782
TCAP Social Studies Scale Score	186.3 (474)	185.0 (310)	186.5	185.1	-1.4	-0.11	0.129

Data sources: ITBS and TCAP, 2006 and 2008

**The method used to calculate effect size was Glass' Δ, the difference between treatment and control groups' adjusted mean test scores divided by the control group's test score standard deviation.*

†Numbers in parentheses are the numbers of students in each group having valid test scores from the baseline 2006 administrations and the spring 2008 administrations.

The estimated impacts of two years of participation in *READ 180* on the "stayers" in the seventh and eighth grades in Year 2 were not statistically significant ($p < 0.05$). There is no reason to reject the hypothesis that the average achievement of the treatment and control groups was the same at the end of Year 2. Participation in *READ 180* for two years did not have a significant impact on student achievement levels in reading or in the four core content areas at the end of Year 2.

Similar analyses carried out separately for each of the two grades yielded similar non-significant estimated impacts with one exception. In seventh grade, there was one significant difference in favor of the treatment group for ITBS vocabulary test scores. However, at a significance level of 0.05, this result may have also been due to chance since one would expect five percent of all hypothesis tests to reject the null hypothesis of no difference when the null hypothesis is true. The complete results of the multi-level analyses of the *READ 180* impact on these seven test scores for the "stayers" in the seventh and eighth grades, by grade, can be found in Appendix G in Tables G-59–G-72.

Two-Year Impact of *READ 180* on Seventh-Grade Students in Year 3

The impact of participating in *READ 180* for two years was examined again in Year 3, looking only at students in the seventh grade. The eighth-grade students had received two years of *READ 180* in sixth and seventh grade, and since the targeted intervention was intended as a two-year intervention, their involvement in the research study was ended. Consequently, the

results based on eighth-grade students MCS may have enrolled in *READ 180* for a third year were omitted.

The same two-level model was used to estimate the difference between treatment and control students on spring 2009 ITBS and TCAP test scores, controlling for the 2007 baseline scores of the seventh-grade students, along with the other student-level covariates. Table IV-15 presents the results of these analyses of the two-year impact of *READ 180* on seventh-grade students. The complete results of the multi-level analyses of the *READ 180* two-year impact on these seven test scores for the "stayers" in the seventh grade can be found in Appendix G in Tables G-73–G-79.

Table IV-15: Two-Year Impact of *READ 180* in Year 3 on Spring 2009 Scores on Each Achievement Test—Seventh-Grade Students

Test Score	Unadjusted Means		Adjusted Means		Est. Impact	Effect Size*	Signif. Level
	Control	*READ 180*	Control	*READ 180*			
ITBS Total Reading Standard Score	196.4 (207)†	193.5 (145)	194.9	194.7	-0.2	-0.01	0.910
ITBS Comprehension Standard Score	192.5 (208)	188.2 (145)	191.0	188.6	-2.4	-0.11	0.266
ITBS Vocabulary Standard Score	199.9 (221)	198.8 (155)	198.6	199.9	1.3	0.07	0.487
TCAP Reading/LA Scale Score	498.0 (342)	494.7 (233)	497.0	495.8	-1.2	-0.04	0.629
TCAP Mathematics Scale Score	508.6 (342)	504.6 (233)	508.2	505.5	-2.7	-0.08	0.281
TCAP Science Scale Score	185.2 (338)	182.4 (229)	185.2	183.0	-2.2	-0.13	0.149
TCAP Social Studies Scale Score	186.0 (336)	185.2 (228)	186.8	185.5	-1.3	-0.11	0.202

Data sources: ITBS and TCAP, 2007 and 2009

**The method used to calculate effect size was Glass' Δ, the difference between treatment and control groups' adjusted mean test scores divided by the control group's test score standard deviation.*

†Numbers in parentheses are the numbers of students in each group having valid test scores from the baseline 2007 administrations and the spring 2009 administrations.

The estimated impacts of two years of participation in *READ 180* on the "stayers" in the seventh grade in Year 3 were not statistically significant ($p < 0.05$). There is no reason to reject the hypothesis that the average achievement of the treatment and control groups was the same at the end of Year 3. Participation in *READ 180* for two years did not have a significant impact on student achievement levels in reading or in the four core content areas at the end of Year 3.

Two-Year Impact of *READ 180* on Seventh-Grade Students in Year 4

The impact of participating in *READ 180* for two years was examined again in Year 4, looking only at students in the seventh grade. The same two-level model was used to estimate

the difference between treatment and control students on spring 2010 ITBS and TCAP[17] test scores, controlling for the 2008 baseline scores of the seventh-grade students, along with the other student-level covariates. Analyses were conducted in NCEs to facilitate cross-site analyses by the Striving Reader Evaluation Technical Assistance contractor. Table IV-16 presents the results of these analyses of the two-year impact of *READ 180* on seventh-grade students. The complete results of the multi-level analyses of the *READ 180* two-year impact on the three ITBS test scores for the "stayers" in the seventh grade can be found in Appendix G in Tables G-80–G-82.

Table IV-16: Two-Year Impact of *READ 180* in Year 4 on Spring 2010 Scores on Each Achievement Test—Seventh-Grade Students

Test Score	Unadjusted Means		Adjusted Means		Est. Impact	Effect Size*	Signif. Level
	Control	*READ 180*	Control	*READ 180*			
ITBS Total Reading NCE	20.2 (123)†	22.2 (140)	20.3	21.5	1.2	0.10	0.364
ITBS Comprehension NCE	23.0 (126)	25.4 (151)	23.0	25.4	2.4	0.22	0.064
ITBS Vocabulary NCE	21.7 (124)	22.6 (141)	22.1	22.1	0.0	0.00	0.999
TCAP Reading/LA Scale Score	698.1 (141)	698.4 (171)	699.8	699.2	-0.6	-0.02	0.837

Data sources: ITBS and TCAP, 2008 and 2010

**The method used to calculate effect size was Glass' Δ, the difference between treatment and control groups' adjusted mean test scores divided by the control group's test score standard deviation.*

†Numbers in parentheses are the numbers of students in each group having valid test scores from the baseline 2008 administrations and the spring 2010 administrations.

The estimated impacts of two years of participation in *READ 180* on the "stayers" in the seventh grade in Year 4 were not statistically significant ($p < 0.05$). However, the impact on comprehension scores approached significance and the effect size was 0.22. There is no reason to reject the hypothesis that the average achievement of the treatment and control groups was the same at the end of Year 4. Participation in *READ 180* for two years did not have a significant impact on student achievement levels in reading at the end of Year 4.

Two-Year Impact of *READ 180* on Seventh-Graders in Years 2–4 Plus Eighth-Graders in Year 2

The impact of participating in *READ 180* for two years was examined for the "stayers" in all ITT samples, i.e., seventh- and eighth-grade students at the end of Year 2 and seventh-grade students at the end of Years 3 and 4. The same two-level model was used to estimate the

[17] Because of substantive changes in the TCAP between Years 3 and 4, and because there were no significant two-year impacts on TCAP Reading/LA or ITBS scores in Year 3, researchers analyzed only the TCAP Reading/LA scores in Year 4.

difference between treatment and control students on spring 2008–2010 ITBS[18] test scores, controlling for the 2006–2008 baseline scores, along with the other student-level covariates. Analyses were conducted in NCEs to facilitate cross-site analyses by the Striving Reader Evaluation Technical Assistance contractor. Table IV-17 presents the results of these analyses of the two-year impact of *READ 180* on all "stayers." The complete results of the multi-level analyses of the *READ 180* two-year impact on these seven test scores for all "stayers" can be found in Appendix G in Tables G-83–G-85.

Table IV-17: Two-Year Impact of *READ 180* in Years 2 through 4 on Spring 2008–2010 Scores on Each Achievement Test—Seventh- and Eighth-Grade Students in Year 2 and Seventh-Grade Students in Years 3 and 4

Test Score	Unadjusted Means		Adjusted Means		Est. Impact	Effect Size*	Signif. Level
	Control	*READ 180*	Control	*READ 180*			
ITBS Total Reading NCE	22.0 (728)†	22.0 (545)	21.7	21.9	0.2	0.02	0.769
ITBS Comprehension NCE	24.8 (739)	24.5 (556)	24.5	24.4	-0.1	-0.01	0.878
ITBS Vocabulary NCE	22.6 (752)	23.1 (562)	22.5	23.2	0.7	0.06	0.294

Data sources: ITBS and TCAP, 2006-2008 and 2008-2010

**The method used to calculate effect size was Glass' Δ, the difference between treatment and control groups' adjusted mean test scores divided by the control group's test score standard deviation.*

†Numbers in parentheses are the numbers of students in each group having valid test scores from the baseline 2006-2008 administrations and the spring 2008-2010 administrations.

The estimated impacts of two years of participation in *READ 180* on the "stayers" in Years 2 through 4 were not statistically significant ($p < 0.05$). There is no reason to reject the hypothesis that the average achievement of the treatment and control groups was the same at the end of Years 2 through 4. Participation in *READ 180* for two years did not have a significant impact on student achievement levels for all "stayers."

Differential Attrition in *READ 180* One-and Two-Year Impact Analyses

The numbers of students in the treatment and control groups in the analyses of one- and two-year impact analyses are smaller than the numbers in the corresponding comparisons of baseline achievement levels. This is because not all of the students with valid baseline scores also had valid scores from the spring 2007, 2008, and 2009 administrations at the end of Years 1, 2, and 3, respectively. Although the levels of attrition for both the treatment and control groups might or might not be similar, the important issue is whether the same types of students, especially in terms of their achievement levels, were lost from both groups. If not, one could argue that the estimated impacts were biased. That is, the treatment group may have lost students that would have scored higher (or lower) than the students lost from the control group.

[18] Because analyses of one year of treatment showed no significant differences between treatment and control groups on the TCAP Reading/LA test in Years 1, 2, 3, or 4, researchers determined that a combined analysis of TCAP Reading/LA scores was not warranted.

This potential differential attrition was studied for the Year 1 ITT sample by comparing the average baseline 2006 test scores of the students who also had a spring 2007 score to the average baseline 2006 test scores of students without a spring 2007 score. This comparison was done for both the treatment and control groups.[19] If this attrition effect were higher or lower in one group, this differential attrition would have to be acknowledged as possibly biasing the estimated impact of participation in *READ 180*.

To illustrate how differential attrition was studied each year, the results of the study of differential attrition for the estimated Year 1 immediate impacts may be found in Appendix I in Table I-1. In summary, Table I-1 shows that the effects of attrition in both treatment and control groups on baseline 2006 test scores did not exceed one standard or scale score point, and no differential treatment effects were statistically significant ($p < 0.05$). It seems reasonable to conclude that differential attrition was not a biasing factor affecting the interpretation of the estimated Year 1 impacts of *READ 180*.

The potential for differential attrition was also studied for the ITT samples of sixth-grade students in Years 2 through 4 by comparing the average baseline test scores of the students with and without spring test scores at the end of the year. For all three years, the interaction of experimental group and having spring test scores was insignificant, indicating no differential attrition between treatment and control groups.

Finally, differential attrition was studied for "stayers" used in the analyses of two-year impacts. No evidence for differential attrition was found in each of the Years 2 through 4.

A Special Analysis of Differential Impacts of READ 180 in MCLA and Non-MCLA Schools in Years 1 and 2

The impact of MCLA on student outcomes is described later in this report. However, separate analyses were carried out with the *READ 180* ITT samples to determine whether the one- and two-year impacts of *READ 180* in Years 1 and 2 were different in the MCLA treatment schools than in the MCLA control schools. (Analyses of the combined effects of MCLA and *READ 180* ended after Year 2 because the MCLA experimental research condition ended when the whole-school intervention moved from Cohort 1 to Cohort 2 schools.)

The dependent and independent variables and the covariates for addressing the research questions about the interaction of *READ 180* and MCLA are the same as those described in the above analyses of *READ 180* impacts, with one exception. An independent variable representing the participation of schools in the MCLA treatment was included in the analytical models for these analyses. This variable was included at the school level since schools were randomly assigned to the MCLA treatment or control condition. This model is specified in Appendix D.

[19] The analytical method was a univariate ANOVA of baseline 2006 test scores, employing a 2x2 factorial design crossing the *READ 180* treatment/control condition with possession (yes/no) of a spring 2007 test score. The interaction of these two factors was tested for significance to determine whether or not there was a differential attrition effect.

The results of the analyses of the seven spring 2007 test scores for the *READ 180* ITT sample in Year 1 are presented in Table IV-18. The unadjusted and adjusted means are presented for the four combinations of *READ 180* treatment/control and MCLA treatment/control conditions. The estimated interaction effect is the difference between the estimated *READ 180* impact in MCLA treatment and control schools. A positive interaction effect means that the *READ 180* impact was larger in MCLA control schools; a negative one means the *READ 180* impact was larger in MCLA treatment schools.

Table IV-18: Interaction of *READ 180* and MCLA Year 1 Impacts on Spring 2007 Scores on Each Achievement Test

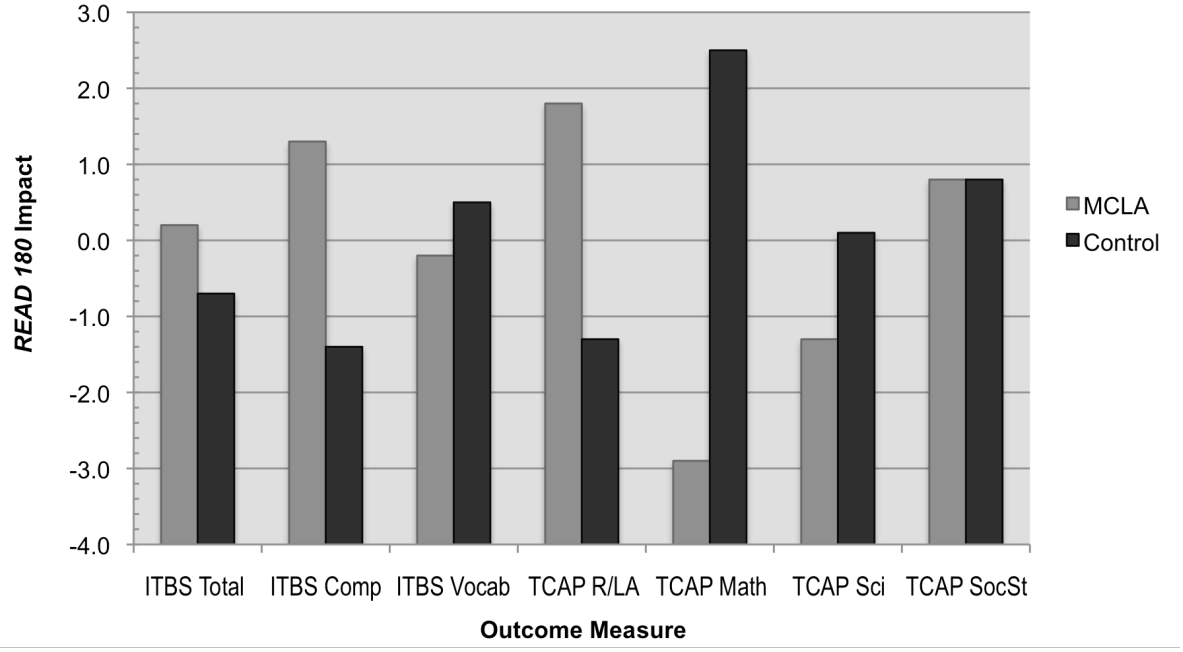
Test Score	Unadjusted Means				Adjusted Means				Est. Interaction Effect* (A-C)-(B-D)	Effect Size	Signif. Level
	READ 180		Control		*READ 180*		Control				
	MCLA	Control	MCLA	Control	MCLA (A)	Control (B)	MCLA (C)	Control (D)			
ITBS Total Reading Standard Score	191.2 (231)	193.7 (280)	191.0 (371)	192.7 (341)	193.6	190.6	193.4	191.3	0.9	0.06	0.518
ITBS Comprehension Standard Score	187.8 (236)	187.5 (281)	185.9 (374)	187.5 (344)	189.7	184.3	188.4	185.7	2.7	0.14	0.168
ITBS Vocabulary Standard Score	196.1 (234)	200.2 (285)	196.3 (381)	197.8 (345)	197.4	197.7	197.6	197.2	-0.7	0.03	0.753
TCAP Reading/LA Scale Score	499.1 (311)	497.0 (353)	496.0 (512)	495.6 (460)	496.6	497.7	494.8	499.0	3.1	0.13	0.245
TCAP Mathematics Scale Score	496.1 (310)	506.8 (351)	498.4 (511)	501.7 (460)	495.9	504.4	498.8	501.9	-5.4	0.15	0.058
TCAP Science Scale Score	184.9 (305)	186.2 (338)	185.3 (503)	184.9 (412)	184.2	186.0	185.5	185.9	-1.4	0.09	0.388
TCAP Social Studies Scale Score	185.1 (306)	186.9 (338)	184.6 (495)	185.7 (411)	185.2	186.5	184.4	185.7	0.0	0.01	0.958

Data sources: ITBS and TCAP, 2006 and 2007

**The formula for the estimated interaction effect reads, "The difference between the* READ 180 *impact in MCLA schools and the* READ 180 *impact in non-MCLA schools."*

Figure IV-1 illustrates the magnitude and direction of these interactions. For example, on the ITBS Total Reading measure, the *READ 180* impact for the MCLA schools is 0.9 points higher (0.2– (-0.7)) in the MCLA schools than it is in the non-MCLA or control schools.

Figure IV-1: *READ 180* Year 1 Impact in MCLA Treatment and Control Schools



Data sources: ITBS and TCAP, 2006 and 2007

These interaction effects range between -5.4 and 3.1, an impact that was slightly more than five scale-score points larger on spring 2007 TCAP mathematics scores in the MCLA control schools and three-scale score points larger on TCAP reading/language arts scores in MCLA treatment schools. Clearly these results are mixed, although the *READ 180* impact is larger in MCLA treatment schools on reading measures (except vocabulary) and larger in MCLA control schools in the other content areas. However, none of the interaction effects is statistically significant ($p < 0.05$), although the effect for the TCAP mathematics scores approached this level. Also, all of the effect sizes are less than 0.2. In summary, it seems reasonable to conclude that the *READ 180* impact on student achievement did not vary significantly between MCLA treatment and control schools in Year 1.

The interaction of the *READ 180* and MCLA impacts was also analyzed for each grade separately. The results for the sixth grade are presented in Table IV-19. Again, the results were mixed and non-significant for the most part. The *READ 180* impact on the spring 2007 TCAP science scores was significantly larger in MCLA control schools than in MCLA treatment schools ($p < 0.05$), and the effect size was 0.32. The larger *READ 180* impact on ITBS vocabulary scores in MCLA treatment schools was not statistically significant, but the effect size was 0.21. It is interesting to note that the pattern of (non-significant) larger *READ 180* impacts in the MCLA treatment schools for reading measures and larger impacts in the control schools for non-reading measures was also present in the sixth-grade results.

Table IV-19: Interaction of Year 1 *READ 180* and MCLA Impacts on Spring 2007 Scores on Each Test—Sixth Grade

	Unadjusted Means				Adjusted Means				Est. Interaction Effect*		
	READ 180		Control		*READ 180*		Control				
Test Score	MCLA	Control	MCLA	Control	MCLA (A)	Control (B)	MCLA (C)	Control (D)	(A-C)-(B-D)	Effect Size	Signif. Level
ITBS Total Reading	185.7 (79)	184.3 (99)	183.4 (145)	183.3 (142)	185.0	183.7	183.8	183.8	1.3	0.11	0.529
ITBS Comprehension	181.4 (80)	178.9 (99)	181.2 (146)	178.2 (142)	180.4	178.4	181.2	179.4	0.2	0.01	0.947
ITBS Vocabulary	190.3 (80)	189.7 (100)	185.6 (146)	188.6 (144)	191.2	188.0	186.7	186.7	3.2	0.21	0.258
TCAP Reading	491.3 (110)	488.0 (118)	489.4 (189)	486.4 (183)	488.4	489.5	487.8	490.2	1.3	0.05	0.781
TCAP Mathematics	493.6 (110)	496.1 (117)	497.2 (189)	491.4 (183)	493.6	495.4	494.3	490.1	-6.0	0.19	0.166
TCAP Science	186.2 (108)	189.5 (113)	187.0 (187)	184.8 (165)	188.3	186.9	189.9	183.1	-5.4	0.32	0.037
TCAP Social Studies	186.9 (109)	187.6 (113)	187.4 (184)	184.5 (165)	186.7	187.6	187.6	185.0	-3.5	0.19	0.240

Data sources: ITBS and TCAP, 2006 and 2007

**The formula for the estimated interaction effect reads, "The difference between the READ 180 impact in MCLA schools and the READ 180 impact in non-MCLA schools."*

Separate analyses conducted for the seventh- and eighth-grade students also yielded only a few interactions worth noting, but they did all favor the *READ 180* impact in MCLA treatment schools. Two statistically significant ($p < 0.05$) interactions were found that supported a larger *READ 180* impact in MCLA treatment schools on ITBS comprehension scores for eighth-grade students (effect size = 0.33) and on TCAP reading/LA scores for seventh-grade students (effect size = 0.40). Another two interactions had effect sizes slightly above 0.20, but were not statistically significant ($p < 0.05$). These two suggested a larger *READ 180* impact in MCLA treatment schools on TCAP reading/LA scores for eighth-grade students and on TCAP science scores for seventh-grade students. The complete results of the multi-level analyses of the Year 1 *READ 180* impact for MCLA treatment and control schools for students in all three grades and each grade separately can be found in Appendix I in Tables I-1–I-28.

Additional analyses of the interaction between *READ 180* and MCLA were carried out on student outcome measures obtained at the end of Year 2. One set of seven analyses examined the interaction of the one-year impact of *READ 180* and MCLA for the Year 2 sixth-grade ITT sample, looking at the spring 2008 ITBS and TCAP scores and controlling for the fall 2007 ITBS and spring 2007 TCAP scores. A second set examined the interaction of the two-year impact of *READ 180* and MCLA for the Year 2 seventh- and eighth-grade "stayers," looking at the 2008 spring ITBS and TCAP scores controlling for the fall 2006 ITBS and spring 2006 TCAP scores. None of the interaction effects in these 14 analyses were statistically significant ($p < 0.05$). The complete results of these additional multi-level analyses can be found in Appendix I in Tables I-29–I-42.

There do not appear to be any clearly interpretable patterns in the differences in *READ 180* impact for MCLA treatment and control schools. In Year 1 there was a suggestion of larger *READ 180* impacts on reading measures in MCLA treatment schools versus larger impacts on non-reading measures in control schools in the sixth and seventh grade analyses as well as the analyses based on all grades. However, of the 42 interaction effects tested for Years 1 and 2, only three (7%) were statistically significant. Using a significance criterion of $p < 0.05$, five percent (or 2) of the 42 tests would be expected to be found significant by chance.

Analyses of the interaction of *READ 180* and MCLA impacts were not carried out in Years 3 and 4 since the MCLA control schools are receiving the MCLA treatment in Years 3 and 4, thus making it impossible to estimate an MCLA impact.

Conclusions Regarding All READ 180 *Impact Analyses*

There was a lack of significant one-year impacts of participation in *READ 180* in Years 1 and 2. There was one small but significant one-year impact on sixth-grade students in Year 3—on the TCAP Reading/Language Arts measure. The lack of significant two-year impacts of participation in *READ 180* was consistent in Years 2 and 3: none of the Year 2 or Year 3 two-year impacts was significant. There were no significant one- or two-year impacts on ITBS scores in Year 4, nor did any of the analyses of combined ITT samples yield significant one- or two-year impacts. Finally, the examination of the interaction between the impacts of *READ 180* and the whole-school intervention in Years 1 and 2 yielded no clearly interpretable patterns in the differences in the impact of *READ 180* for MCLA treatment and control schools.

Further Analyses

In an earlier footnote, it was noted that three-level regression models were explored to include the characteristics of teachers linked to students for each core content area. These analyses were sufficiently complex and the results sufficiently equivocal to lead to the decision to omit their results from any further reporting. In addition, they did not result in different estimates of *READ 180* impact. Therefore, it was also decided to omit analyses designed to determine if *READ 180* impacts are moderated by teacher characteristics. (Moderation by school characteristics was not investigated in the two-level models due to the very low levels of between-school variation.) Secondary analyses were conducted to confirm further the results of

the Year 3 and 4 analyses, and findings from these analyses are included in the following subsection.

Propensity Score Analyses of One-Year and Two-Year Impacts of READ 180

To confirm the results of the impact analyses presented earlier in this section, the evaluators created matched samples of students using Propensity Score Matching (PSM) and then conducted independent-samples t-tests to compare outcomes across the matched groups. The analytic samples were composed of sixth-grade students who had received one year of treatment during any of the study years and of students who had received two years of treatment during any two of the study years. Because of wide variations in implementation fidelity during Year 1, data from this year were not included in these analyses. This provided a method to determine whether the implementation variations had enough impact to affect the entire samples.

The outcome measures for these analyses are the same as those in the impact analyses: ITBS Total Reading, Comprehension, and Vocabulary. For the one-year analysis, the outcome variables are the scores achieved by students in the spring of their first (or only) year in *READ 180*. For the two-year analysis, the outcome variables are the scores achieved in the spring of the students' second year in *READ 180*.

The analytic sample for one year of treatment ($N = 1{,}667$) consists of 795 treated students and 872 control students. Table IV-20 shows the distribution of the sample by year. There are 507 cases with missing values in at least one variable. Multiple imputations (MI) were employed to replace the missing values on each variable with predicted values based on the observed data (Rubin, 1987; Schafer, 1997; Allison, 2001). In this study, the imputed value was the average of predicted values from five imputations, as recommended by Allison (2001). The MI approach not only helped retain the complete sample but also generated much less biased estimates of parameters and more accurate standard errors compared to deterministic imputation methods, such as mean substitution (Haitovsky, 1968; Allison, 2000).

Table IV-20: Distribution of Students (All in Sixth Grade) in Treatment and Control Groups by Year—One-Year Impact Analysis

Year	Treatment	Control
2	283	390
3	274	223
4	238	259
Total	795	872

Data sources: MCS demographic and achievement test data files, Years 2 through 4

The propensity score $e(x)$ is the probability that a student with observed covariates $\boldsymbol{X} = x$ is assigned to the treatment group rather than the control group, which is computed using the following formula (Cox, 1970):

$$e(\boldsymbol{x}) = P(S=1|\ \boldsymbol{X}=\boldsymbol{x}) = \frac{\exp(\alpha + \beta^T x)}{1+\exp(\alpha + \beta^T x)}$$

In the equation above, S denotes the treatment (S = 1 if assigned to *READ 180*, and S = 0 if assigned to control), *X* denotes a set of observed covariates, $e(\mathbf{x})$ or P(S = 1|X = x) denotes the probability of a student being assigned to *READ 180* given a vector of observed covariates *x*, and exp $(\alpha + \beta^T x)$ denotes the exponential function of the coefficients in a fitted logistic regression. Note that the value of $(\alpha + \beta^T x)$ represents the estimated odds of a student being in *READ 180*. Following a strategy suggested by Rosenbaum and Rubin (1984), evaluators built a propensity score model using stepwise logistic regression with all covariates and their two-way interactions as candidate variables. The variables that were retained in the logistic regression model are the number of days a students was registered for ELA, the quadratic term of ELA days, the quadratic term of TCAP reading pretest scores, whether the student is African American, and ITBS Total Reading pretest scores. The optimal matching was applied using the "optmatch" package in R (Hansen & Klopfer, 2006) based on the estimated propensity score so that the average absolute propensity score difference between the matched pairs is minimized (Gu & Rosenbaum, 1993).

Evaluators used the standardized bias (SB) introduced by Rosenbaum and Rubin (1985) to examine bias reduction before and after matching. A lower SB indicates that the matched samples are more similar than the original, randomly determined ITT samples.

$$SB = \frac{100(\bar{x}_{treated} - \bar{x}_{control})}{\sqrt{\frac{s^2_{treated} + s^2_{control}}{2}}}$$

Table IV-21 shows the means, standard deviations, and standardized biases of both unmatched and matched samples across treatment and control groups for the one-year impact analysis. As shown by the table, the treated and control groups have noticeable differences on several observed covariates, such as proportion of English Language Learners (ELL), proportion of African Americans, number of days registered for ELA classes, ITBS Total Reading pretest scores (ITBS tot Pre), TCAP math pretest scores (TCAP Math Pre), and TCAP reading pretest scores (TCAP Read Pre). The absolute SBs of these covariates are larger than 10 before the matching. After the matching, the number of covariates with absolute SBs greater than 10 dropped from six to one (i.e., days registered in ELA classes). The average absolute SB dropped from 6.63 to 2.61. Therefore, the treated and control groups are roughly similar after the matching.

Table IV-21: Comparison of the Covariate Balance Between the Matched Pairs with the Balance between the Unmatched Treated and Control Groups in One-Year Treatment Data File

	Unmatched data					Matched data				
	Treated (*N* = 795)		Control (*N* = 872)			Treated (*N* = 777)		Control (*N* = 777)		
Variable	M	SD	M	SD	S.B.	M	SD	M	SD	S.B.
Gender	0.49	0.50	0.46	0.50	5.94	0.49	0.50	0.46	0.50	4.38
FRL	0.97	0.18	0.96	0.20	5.68	0.97	0.17	0.95	0.21	7.41
ELL	0.03	0.18	0.06	0.24	-12.64	0.03	0.18	0.04	0.20	-2.71
AfrAmer	0.96	0.19	0.93	0.25	13.42	0.96	0.19	0.96	0.19	0.00
ELA Days	138.04	38.45	144.33	26.52	-19.03	141.16	32.90	144.30	27.12	-10.41
ITBS Voc Pre	185.36	15.88	186.87	15.97	-9.45	185.47	15.92	185.64	15.96	-1.06
ITBS Com Pre	179.53	15.18	180.89	14.64	-9.09	179.66	15.26	180.33	14.67	-4.42
ITBS Tot Pre	182.47	12.41	183.88	12.16	-11.50	182.59	12.46	182.99	12.07	-3.26
TCAPMath Pre	484.96	25.42	487.55	24.12	-10.46	484.91	25.60	486.72	24.32	-7.23
TCAPRead Pre	479.45	25.97	482.81	22.96	-13.71	479.51	26.06	481.59	23.50	-8.39
TCAPScie Pre	180.36	16.85	181.21	17.03	-5.01	180.40	16.88	180.52	17.46	-0.73
TCAPSoc Pre	187.29	12.97	188.33	13.00	-8.01	187.25	13.02	187.66	13.16	-3.08
				Mean SB	-6.63				Mean SB	-2.61

Data sources: MCS demographic and achievement test data files, Years 2 through 4
Note: SB = Standardized Bias

Table IV-22 compares the differences between treated and control units in ITBS vocabulary, comprehension, and total reading posttest scores before and after the optimal matching. As shown by the table, before the matching the control group outperformed the treated group by 1.16 points ($p < .05$) on the ITBS Total Reading posttest score. After the matching, the two groups had no significant differences in any of the three outcome variables.

Table IV-22: Comparison of the ITBS Posttest Scores Between the Matched Pairs with the ITBS Posttest Scores between the Unmatched Treated and Control Groups in the One-Year Treatment Data File

		Unmatched					Matched				
ITBS Posttest	Group	N	M	SD	Mean Diff.	*p*	N	M	SD	Mean Diff.	*p*
Vocabulary	T	795	187.19	14.32	-1.21	.09	777	187.31	14.66	-.56	.45
	C	872	188.40	14.68			777	187.87	14.37		
Compre-hension	T	795	179.65	14.73	-1.11	.13	777	179.71	14.78	-.31	.68
	C	872	180.76	14.97			777	180.02	14.70		
Total Reading	T	795	183.42	11.95	-1.16	**.049**	777	183.51	12.00	-.44	.47
	C	872	184.58	11.95			777	183.95	11.82		

Data sources: MCS demographic and achievement test data files, Years 2 through 4
Note: The p *values are based on independent-samples t-tests for equality of means between the treated and control groups.*

The analytic sample for two years of treatment (N = 1,720) consists of 574 seventh-graders and 159 eighth-graders in the treated group and 746 seventh-graders and 241 eighth-graders in the control group. Table IV-23 shows the distribution of the sample by year. There are 553 cases that had missing values in at least one variable. As in the one-year impact analysis, multiple imputations were conducted to replace all missing values on each variable with predicted values from regression models based on the observed data. Evaluators again built a logistic regression model using stepwise selection of covariates (Rosenbaum & Rubin, 1984). The variables that were retained in the model include English Language Learners, the quadratic term of TCAP reading pretest scores, and whether the student received free or reduced-price lunch.

Table IV-23: Distribution of Students in Treatment and Control Groups by Year—Two-Year Impact Analysis

Year	Seventh Grade		Eighth Grade	
	Treatment	Control	Treatment	Control
2	160	260	159	241
3	243	345	0	0
4	171	141	0	0
Total	574	746	159	241

Data sources: MCS demographic and achievement test data files, Years 2 through 4

Table IV-24 shows that the standardized biases of all covariates in the two-year impact group are much smaller for the matched data than for the unmatched data. In particular, the average absolute SB decreased from 1.51 to 0.42. This indicates that the treated and control groups are much more similar after the optimal matching. Table IV-25 compares the differences between treated and control units in ITBS Vocabulary, Comprehension, and Total Reading posttest scores before and after the optimal matching. As shown by the table, the two groups had no significant differences in any of the three outcome variables before or after the optimal matching. This lack of differences confirms the findings of the ITT analyses presented earlier in this section. It also suggests that the wide variations in implementation fidelity during Year 1 did not wipe out effects that would have appeared in multiyear ITT analyses if Year 1 had been omitted.

Table IV-24: Comparison of the Covariate Balance Between the Matched Pairs with the Balance between the Unmatched Treated and Control Groups in Two-Year Treatment Data File.

	Unmatched data					Matched data				
	Treated (*N* = 733)		Control (*N* = 987)			Treated (*N* = 733)		Control (*N* = 733)		
Variable	M	SD	M	SD	SB	M	SD	M	SD	SB
Gender	0.47	0.50	0.46	0.50	2.14	0.47	0.50	0.47	0.50	-0.27
FRL	0.93	0.26	0.91	0.29	7.77	0.93	0.26	0.93	0.26	0.00
ELL	0.05	0.21	0.07	0.25	-9.91	0.05	0.21	0.05	0.21	0.00
AfrAmer	0.95	0.22	0.93	0.26	8.12	0.95	0.22	0.95	0.22	0.00
ELA Days	0.22	0.41	0.24	0.43	-6.47	0.22	0.41	0.26	0.44	-9.62
Grade 8	144.41	26.38	144.38	24.35	0.14	144.41	26.38	144.53	24.43	-0.46
ITBS Voc Pre	188.44	17.47	188.88	17.45	-2.57	188.44	17.47	188.34	17.44	0.52
ITBS Com Pre	181.73	16.02	182.45	15.48	-4.57	181.73	16.02	181.98	15.02	-1.56
ITBS Tot Pre	185.11	13.66	185.67	13.20	-4.21	185.11	13.66	185.17	13.04	-0.46
TCAPMath Pre	486.64	24.74	486.41	27.28	0.88	486.64	24.74	484.10	27.95	9.62
TCAPRead Pre	477.59	26.98	479.72	25.61	-8.07	477.59	26.98	478.11	25.61	-1.98
TCAPScie Pre	181.95	15.82	182.10	16.30	-0.94	181.95	15.82	181.39	16.26	3.48
TCAPSoc Pre	187.44	15.73	187.23	15.88	1.36	187.44	15.73	186.23	16.75	7.48
				Mean SB	-1.51				Mean SB	0.42

Data sources: MCS demographic and achievement test data files, Years 2 through 4
Note: SB = Standardized Bias

Table IV-25: Comparison of the ITBS Posttest Scores Between the Matched Pairs with the ITBS Posttest Scores between the Unmatched Treated and Control Groups in Two-Year Treatment Data File.

ITBS Posttest	Group	Unmatched					Matched				
		N	M	SD	Mean Diff.	*p*	N	M	SD	Mean Diff.	*p*
Vocabulary	T	733	196.01	16.12	-.47	.55	733	194.84	16.12	.02	.98
	C	987	196.48	16.12			733	194.82	16.13		
Compre-hension	T	733	189.72	19.00	-1.29	.17	733	189.72	19.00	.83	.40
	C	987	191.18	19.35			733	190.55	18.93		
Total Reading	T	733	199.41	19.92	.35	.72	733	199.41	19.92	.85	.41
	C	987	199.29	19.57			733	198.59	19.62		

Data sources: MCS demographic and achievement test data files, Years 2 through 4

V. Evaluation of the Implementation of the Whole-School Intervention, Year 4

Summary of the Design

Section V presents results from the evaluation of the Year 4 MCLA whole-school intervention, which was provided to teachers in Cohort 2 schools for the final two school years (Years 3 and 4) of the Memphis Striving Readers Project. During Years 1 and 2, developers provided the intervention to teachers at Cohort 1 schools, while Cohort 2 teachers served as research controls in experimental analyses. At the end of Year 2, the professional development intervention moved to Cohort 2 schools to offer teachers an opportunity to receive literacy coaching support and other program services. RBS evaluated aspects of program implementation, including participation rates, level of coaching support offered, attendance at evening course sessions, and the level of implementation fidelity to the original MCLA model designed by developers for the final year of operations.

The following subsections detail the research questions addressed in the Year 4 implementation evaluation of the whole-school intervention, contextual factors affecting teachers and students in all eight Striving Readers schools, and the information used to calculate ratings of implementation fidelity at the four Cohort 2 schools.

The implementation evaluation of the MCLA whole-school intervention in Year 4 addressed two overarching research questions:

1. What contextual district- and school-level factors influenced the implementation of the MCLA program?
2. To what degree did the implemented MCLA treatment match the intended program standards and features?

Specific research questions about the implementation of the whole-school intervention in Cohort 2 schools are as follows:

- What was the Year 4 MCLA classroom instructional model?
- What types and amounts of professional development were provided to teachers, principals, and literacy coaches?
- What proportion of teachers received and participated at different levels of professional development (e.g., how many used program materials or completed the evening MCLA course)?
- What types of coaching support was provided to teachers?
- What was teachers' level of program implementation?

To address these questions, RBS collected information from program participants and MCLA experts in the following ways: First, evaluators conducted interviews with the eight (100%) principals at the Striving Readers schools and collected survey data from 214 (98.1%) teachers to provide insight into factors influencing MCLA implementation and for information about related

professional development events offered in the Cohort 2 schools. Second, evaluators reviewed information contained in course syllabi, MCLA instructor templates, transcripts of interviews with program experts and developers, and curricular resource center (CRC) inventory lists to address the research question about the extent to which the MCLA treatment as implemented matched the intended program model. Third, RBS examined MCLA course attendance sheets, coaching logs, and CRC checkout logs for answers about the types of professional development provided and levels of program participation. Fourth, RBS measured classroom implementation in Year 4 among Cohort 2 teachers through analysis of data collected using teacher surveys, weekly checklists, daily coaching logs, and direct observation. Evaluators also analyzed the coaching logs and teacher survey responses for further details about the type of coaching services that were provided to participants.

Finally, as mentioned in Section I of this report, RBS also engaged the MCLA literacy coaches (who provided frequent, in-class support to teachers) in rating teachers' level of implementation fidelity with respect to specific classroom practices. The Innovation Configuration (IC) Map (Hall & Hord, 2006) developed by the grant team provides operational definitions of program components at various levels of implementation. The teacher-related practices rated by coaches during a one-and-a-half-day retreat designed and facilitated by RBS included the following:

- introducing literacy strategies to students
- modeling how to use the strategies
- providing instruction that is explicit and direct
- differentiating instruction
- enabling students to use strategies independently
- revisiting strategies consistently during lessons

Throughout the school year, coaches collected evidence about teacher implementation such as observation notes, student work products, and class handouts. Before using the IC Map to rate fidelity implementing the specific components, RBS asked the coaches to assign global ratings (i.e., low, medium, high) for an individual teacher based on their overall impression of the teacher's highest level of implementing a composite comprising of all five components. Coaches drew upon their professional experience with teachers and data sources in each teacher's portfolio and issued a separate rating for each component. A cluster analysis conducted by RBS evaluators showed significant agreement between coaches' initial global ratings assigned to teachers and computer-generated clusters based on specific ratings of each component. Clusters indicated that the IC Map was useful in describing observable aspects of teaching and learning and sufficiently sensitive to distinguish between various levels of implementation fidelity.

As part of the cross-site Striving Readers evaluation, RBS analyzed the information described in this section to address three overarching research questions:

1. What was the level of implementation and variability of professional development for teachers, coaches, and principals?

2. What was the level of implementation and variability of classroom instruction?

3. What did the counterfactual look like?

Figure V-1 shows "at a glance" the type of information that was collected from each stakeholder group as part of the Year 4 cross-site Striving Readers evaluation.

Figure V-1: Data Sources Linked to Striving Readers Research Questions—MCLA, Year 4

Research Questions	Measures/Data Sources									
	Surveys/Logs			Interviews			Class Obs.	Record Review		
	Teacher	Coach	District	Coach	Principal	Experts	Evaluator	PD Attendance Records	Coach- IC Map	CRC Records
What was the level of implementation and variability of professional development for teachers, coaches, and principals?										
Type/amount of PD provided to *teachers*	X	X						X		X
Proportion of *teachers* at different levels of PD	X	X						X		X
Proportion of *teachers* at adequate level of PD	X	X						X		X
Types/amount of coaching provided to *teachers*	X	X								
Proportion of *teachers* at different levels of coaching	X	X								
Proportion of *teachers* at adequate level of coaching	X	X								
Type/amount of PD provided to *coaches*		X	X							
Proportion of *coaches* at different levels of PD		X	X							
Type/amount of PD provided to school *principals*			X					X		
Proportion of school *principals* at different levels of PD			X					X		
What was the level of implementation and variability of classroom instruction?										
Proportion of *teachers* with access to materials and resources	X	X								X
Proportion of *teachers* who implemented literacy strategies (CAPs)	X						X			
Proportion of *teachers* who implemented the model at adequate level	X	X					X	X	X	X
What did the counterfactual look like?										
Proportion of *teachers* reporting literacy-related PD at follow-up	X						X			

Contextual Factors in MSRP Schools

RBS interviewed each of the eight building principals in spring 2010 about school district initiatives that might affect MCLA implementation or its sustainability. (See Appendix J for the principal interview guide.) Six principals identified district and state initiatives that had an impact on either supporting or serving as barriers to their efforts to improve students' implementation of MCLA literacy strategies. Principals cited the following initiatives as either supporting or hindering MCLA implementation in their schools:

- The presence of additional *READ 180* teachers provided by the grant facilitated overall MCLA implementation; however, scheduling issues posed ongoing challenges in schools that did not operate on block schedules. The 90-minute *READ 180* class reduced the time available for participating students to enroll in other classes since all other courses operated on a different schedule.
- Implementation of the Stanford Math Initiative in Year 4 reduced teachers' ability to integrate literacy strategies into instruction because of the computerized and scripted nature of the supplemental program.
- New state curricular standards accelerated teaching the required curriculum so that teachers were compelled to teach two years' worth of standards in one year. One principal felt this was particularly onerous for mathematics teachers in Year 4 and likely affected teachers' MCLA implementation.

Other changes, such as staff turnover and participation in new initiatives, affected MCLA implementation, especially among Cohort 1 schools who received the intervention during the 2006 and 2007 school years. Despite these hurdles, one Cohort 1 school has intensified its focus on literacy integration across the curriculum, partly in response to district goals related to reading comprehension. Most principals valued the MCLA schoolwide initiative and saw evidence of continued implementation of MCLA strategies in their schools.

Finally, survey information collected from teachers at the eight MSRP schools in May 2010 reveals the extent to which teachers participated in professional development in Year 4 other than MCLA that may have complemented or "competed" with the intervention. (See Appendix K for the instrument.) Teachers were asked to think about the 2009–2010 school year when responding to questions about the following:

- how many hours of professional development in specific topic areas they had received
- how prepared they felt to engage in a set of 24 specific literacy activities
- how often they had implemented the 24 literacy strategies

Specifically, teachers were asked to respond to questions about time spent in professional development using a four-point likert scale, where 0 = "no hours spent," 1 = "1 to 8 hours spent," 2 = "9 to 32 hours," and 3 = "32 or more hours of professional development." A total of 214 (98.1%) teachers completed the Teacher Implementation of Strategies Questionnaire (TISQU) in May 2010: 102 (47.7%) respondents worked in Cohort 1 schools and 112 (52.3%) respondents were from Cohort 2 schools. Sixty-three (61.7%) of the Cohort 2 survey respondents had

participated in MCLA, representing 67 percent of all 94 Year 4 participants who had completed either semester of MCLA.

Results from an independent *t* test for equality of means show no cohort differences in Year 4 with regard to the amount of time respondents reported participating in staff development in four areas: (1) their subject discipline; (2) state or district curricular standards; (3) class management; or (4) addressing the needs of students with disabilities. Cohort differences did emerge, however, with regard to the amount of time respondents spent in staff development in the past year in (1) new teaching methods (t = -2.43,df = 206, $p < .05$); (2) technology integration (t = -2.03, df = 211, $p < .05$); (3) student assessment (t = -2.09, df = 211, $p < .05$); (4) addressing English Language Learners (t = -2.64, df = 208, $p < .05$); and (5) literacy integration (t=.-5.16, df = 211, $p < .05$).

Table V-1 summarizes the means and corresponding standard deviations for responses about time spent in professional development that were significantly different by teacher cohort. Since responses ranged from "0 to 3", a response of "2" indicates that a teacher reported receiving between 9 and 32 hours of professional development in a given topical area. As the table shows, the mean responses among Cohort 2 teachers were significantly higher than for Cohort 1 teachers in time spent in professional development in each of the five areas.

Table V-1: Means and Standard Deviations for Survey Responses* to Items about Time Spent in Professional Development by Cohort (*N* = 214), Year 4

	Mean†	Standard Deviation
New methods of teaching		
Cohort 1 (*N* = 102)	1.34	0.76
Cohort 2 (*N* = 112)	1.60	0.78
Integration of educational technology		
Cohort 1	1.22	0.70
Cohort 2	1.43	0.80
Student performance assessment		
Cohort 1	1.36	0.74
Cohort 2	1.59	0.80
Addressing the needs of ELL students		
Cohort 1	0.71	0.82
Cohort 2	1.03	0.91
Integrating literacy in the classroom		
Cohort 1	1.24	0.85
Cohort 2	1.85	0.87

Data source: RBS TISQU, May 2010

** Significant at the* p < *.05 level*

† Based on the following scale: 0 = no time spent; 1 = spent 1 to 8 hours, 2 = spent 9 to 32 hours, and 3 = spent 32 or more hours

Table V-2 shows the percentages of teachers who reported participating in each area of professional development for nine or more hours during the school year. Generally, respondents reported high levels of professional development participation in all topical areas measured. For example, as indicated in the table, 46.7 percent of the 214 survey respondents reported participating in nine or more hours of professional development in the subject area in which they primarily teach, and 46.6 percent of teachers spent at least nine or more hours in the past year engaged in learning new teaching methods. As expected, 62.5 percent of Cohort 2 respondents reported receiving nine or more hours of professional development in literacy integration.

It should be noted that while teachers' self-reported professional development participation signals a general trend, it is possible that teachers interpreted the professional development definitions differently when completing survey items. For example, in the first two years of this grant, many MCLA teachers underestimated the amount of time engaged in literacy training because they tended to define "professional development" in terms of in-service district events. In Year 4, respondents appear to have more accurately reported their MCLA participation.

Table V-2: Percentages of Teachers Reporting that they Participated in *Nine or More Hours* of Professional Development in Past Year by MCLA Cohort, May 2010 (*N* = 214)*

	Cohort 1 Schools (*N* = 102)	Cohort 2 Schools (*N* = 112)	Total (*N* = 214)
In-depth study in the subject area taught	42.2%	50.9%	46.7%
New methods of teaching (e.g. cooperative learning)	40.0%	52.8%	46.6%
State or district curriculum and performance standards	38.8%	51.8%	45.7%
Integration of educational technology into the classroom	29.7%	37.5%	33.8%
Student performance assessment (e.g. methods of testing, applying results to modify instruction)	36.3%	47.7%	42.3%
Class management including student discipline	29.4%	31.2%	30.3%
Addressing the needs of English language learners or students from diverse cultural backgrounds	17.0%	22.7%	20.0%
Addressing the needs of students with disabilities	30.3%	30.3%	30.3%
Integrating literacy in the classroom	30.7%	62.5%	47.4%

Data source: RBS TISQU Survey, May 2010
** Sample sizes for individual items varied slightly due to a minimal amount of missing data.*

The following subsections explore the extent to which the implementation of the teacher and principal professional development courses approximated the intended MCLA design through a review of Year 4 content and assignments. Next, the report presents the results of the analyses of teachers' participation and retention rates, use of CRC materials, and collaboration with literacy coaches. These are followed by results from analyses of teacher implementation ratings provided by literacy coaches and classroom observations conducted by evaluators. Finally, the report presents implementation ratings evaluators calculated for each of the four participating Cohort 2 schools during Year 4.

MCLA Course Content

Figure V-2 summarizes the topics addressed in the MCLA teacher course offered to Cohort 2 teachers in Year 4. Course topics reflected the developers' goal of promoting strategies aimed at building students' vocabulary, fluency, and comprehension skills before, during, and after reading. Cohort 2 teachers were required to complete five classroom action plans (CAP) (three in the fall and two in the spring) and two poster presentations. Assignments in the fall 2009 semester focused on using word maps and games to build vocabulary, student-generated questions for improving comprehension, and one-minute reading activities for increasing fluency. In spring 2010, developers reviewed before-, during-, and after-reading activities and addressed topics such as working with over-aged students, incorporating content literacy assessments into a lesson, and how to analyze student work. (See Appendix L for course syllabi and Appendix M for an example of a CAP).

Figure V-2: MCLA Year 4 Course Topics

Fall 2009	Spring 2010
• Increasing Vocabulary Knowledge • Teaching Tactic/Concept: Before, During, and After Reading Strategies • Building Vocabulary: Semantic Features Analysis, Word Maps, Concept Maps, and Six Degrees of Separation Game • Constructing a Pre- and Post-test for Whole Class Assessment Using Word Map • Optional Strategies: Classroom Blogging and Wiki Writing (with or without Technology) • Improving Comprehension: Marzano's Question Stems as Pre/Post-test Assessments • Previewing Text Using THIEVES and SEARCHES before Reading • Fix-up Strategies (During and After Reading) • Doing a Content Analysis to Identify Key Facts, Concepts, and Generalizations in a Unit of Study • Building Fluency: One-Minute Academic Reading, Neurological Impress, and "Scooping"	• Introducing Anchor Activities • Before, During, and After Reading Options for Fluency, Vocabulary, and Comprehension • Implementing a Content Literacy Assessment • Homework and Parental Involvement • Working with Over-Aged Students • Analysis of Student Work for Planning Instruction

Data source: MCLA syllabi, 2009–2010 school year

In Year 4, the lead MCLA developer created a course template for all instructors to follow during each session of the evening course. Instructors for each content area (i.e., mathematics, social science, ELA, and science) adapted the template where necessary to address content-specific material. The templates included a rubric to guide the activity, a scoring sheet, an out-of-class assignment, and the CAP. (See Appendix N for an example of a fall 2009 instructor template on the topic of using Semantic Features Analysis, Word Maps, and Concept Maps to improve vocabulary.)

MCLA Course Participation

In Year 4, MCLA professional development was expanded to include all full-time school personnel who provided instruction to students, including content and exploratory teachers, counselors who occasionally taught a class, and those teaching in special education self-contained classrooms. There was no official kick-off ceremony held in Year 4 as there had been previously, and professional development commenced on September 1, 2009. MCS files show that 156 teachers and school counselors were eligible for MCLA in fall 2009. As shown in Table V-3, the number of teachers completing the fall semester was 93, which represents 59.6 percent of the 156 eligible staff at Cohort 2 schools. Seventeen (16.0%) of the 93 fall completers discontinued MCLA after the fall semester; one new teacher completed only the spring semester. Overall, 94 teachers completed *either* Year 4 semester, and a total of 77 MCLA participants—or 82.7 percent of all enrolled teachers—completed *both* fall and spring semesters. The percentage of eligible teachers at each school who enrolled in MCLA ranged from 44 percent at one school to 72.7 percent at another school in fall 2009; participation levels at these schools in the spring were 24 percent and 60 percent, respectively.

Table V-3: Numbers and Percentages of MCLA Participants by School, Year 4

School	Number of Eligible Teachers*	Number of MCLA Completers		Number Completing both Semesters	Percentage of Eligible Teachers in MCLA		Percentage of all MCLA Completers	
		Fall	Spring	Year 4	Fall	Spring	Fall	Spring
School A	55	40	33	33	72.7	60.0	43.1	42.3
School C	25	11	6	6	44.0	24.0	11.8	7.7
School H	48	27	24	23	56.3	50.0	29.0	30.8
School L	28	15	15	15	53.5	53.5	16.1	19.2
Total	**156**	**93**	**78**	**77**	**59.6%**	**50.0%**	**100.0%**	**100.0%**

Data sources: MCS district files and MCLA Attendance Sheets, 2009–2010 school year
** All teachers were eligible to participate in MCLA, including content, exploratory, and special education teachers.*

In Year 4, developers offered a total of 42.5 hours of MCLA course-related professional development to participants. Staff provided nine fall evening sessions (20.25 hours) and nine spring semester classes (approximately 20.25 hours) in addition to an evening Laureate ceremony (2 hours) where teachers presented posters of their final work. As in previous years, evening sessions typically ran from 4:15 to 6:30 p.m. (Since teachers participated in 49 hours of course-related MCLA professional development during the previous year, developers delivered a total of 91.5 hours of classes over the two-year intervention period to Cohort 2 teachers. This total number of hours of service delivery excludes time spent with onsite literacy coaches.)

Table V-4 summarizes the number and percentage of course participants by MCLA content area (ELA, mathematics, science, and social studies) and shows that the social studies course had the greatest percentage of MCLA participants, while science had the lowest percentage of participants (11.8%).

Table V-4: Numbers of Course Participants by MCLA Content Area, Year 4

	Number of MCLA completers			Percentage of all MCLA Participants		
Content area	**Fall**	**Spring**	**Both**	**Fall**	**Spring**	**Both**
ELA	28	23	23	30.1	29.5	29.9
Mathematics	24	17	16	25.8	21.8	20.8
Science	11	9	9	11.8	11.5	11.7
Social studies	30	29	29	32.2	37.2	37.6
Total	**93**	**78**	**77**	**100%**	**100%**	**100%**

Data source: MCLA stipend lists, Year 4

Table V-5 summarizes participants' primary subject area taught in Year 4 and shows that 42.6 percent of MCLA teachers taught a content area as their primary subject area, while another 13.8 percent remaining teachers primarily taught special education or other classes, and 6.3 percent taught reading.

Table V-5: Percentage Distribution of MCLA Participants by Primary Subject Area Taught, Year 4 (*N* = 94)

	Number of Participants	Percentage of All MCLA Participants
Content Area		**42.6**
ELA	16	17.1
Mathematics	7	7.4
Science	9	9.6
Social studies	10	10.6
ELL/ESL	**2**	**2.1**
Reading	6	**6.3**
Special Education	13	**13.8**
Exploratory		**7.4**
Art/Music	3	3.2
Computer/Technology	1	1.0
Foreign Language	3	3.2
Other (e.g., counselor)	16	**17.1**
Unknown	8	**8.5**

Data source: MCS District data files, 2010

Table V-6 summarizes the number and percentage of MCLA completers who had high attendance (defined as having attended 80 percent or more of the evening professional development sessions) in either academic semester and for the overall school year. Results show that attendance among Cohort 2 participants was reasonably high: 55 (71.4%) of the 77 participants who completed both semesters had, on average, an attendance of 80 percent of the sessions or more. Specifically, 20 (86.9%) of the 23 ELA attendees completing both semesters had an average attendance of at least 80 percent of the sessions; 11 (68.8%) of the 16 teachers in

the mathematics area had high attendance; and 24 (82.8%) of the 29 social studies completers had high attendance. None of the teachers attending science met the threshold for high attendance in Year 4.

Table V-6: Percentages of MCLA Teachers with High Attendance* by Content Area, Year 4

	Fall 2009			Spring 2010			Year 4		
Content Area	Total Completing Content Classes	High Attendance		Total Completing Content Classes	High Attendance		Total Completing Both Semesters	High Attendance for Full Year†	
	#	#	%	#	#	%	#	#	%
ELA/READ 180	28	22	78.5	23	17	73.9	23	20	86.9
Mathematics	25	16	64.0	17	9	52.9	16	11	68.8
Science	11	0	0.0	9	0	0.0	9	0	0.0
Social Studies	30	16	53.0	29	17	58.6	29	24	82.8
Total	**94**	**54**	**57.5**	**78**	**43**	**55.1**	**77**	**55**	**71.4**

Data source: Instructors' MCLA attendance sheets
**Defined as attending ≥ 80 percent of sessions*
†RBS averaged the attendance rates for those completing fall and spring semesters.

MCLA Principal Fellowship Course Participation

In Year 4, MCLA developers met with building principals and other school leaders to discuss issues related to school literacy and MCLA implementation. The class—comprised of 11 individuals from four schools—met four times on the following dates: (1) September 14, 2009; (2) October 20, 2009; (3) November 16, 2010; and (4) February 1, 2010. Four (36.4%) participants had perfect attendance, four (36.4%) attended three times, two (18.1%) attended twice, and one individual (9.0%) attended one session. Three of the four Cohort 2 principals attended all four sessions, while one principal missed a session due to scheduling conflict. Three attendees worked as instructional support specialists/facilitators and the remaining four participants worked as vice principals.

Information collected from principals through structured interviews suggests that each found the meetings professionally valuable and tended to characterize the experience as enhancing their professional knowledge and skills. Respondents particularly praised developers for providing opportunities to interact with other principals about best practices for implementing literacy strategies in their schools. Principals stated that MCLA facilitators encouraged them to conduct school walkthroughs with a focus on literacy, which they suggested strengthened their own observational techniques and sparked discussions with teachers about instructional approaches. They shared the following insights about their experiences in the leadership seminar:

- Participation helped principals to support teachers more effectively by improving their understanding of what MCLA teachers were learning and what the expectations were for teachers' implementation of literacy strategies.

- The research-based articles provided through the seminar were valuable for informing best practices in the school.
- Respondents learned techniques for ensuring that teachers implement a range of different strategies to support student achievement.

Three of the principals indicated that they expect to sustain the professional network established through the fellowship meetings. This assessment was based on the prior existence of a closely-knit group of middle school principals and the fact that the principals recognized the value of sharing with each other their experiences of successful practices in their schools.

Curriculum Resource Center (CRC) Use

In addition to funding the professional development course and literacy coaching services, the MSRP grant provided participants with a CRC that housed an array of reading materials and themed resources for use with their students. The repository included resources such as *National Geographic* leveled text thematic sets, readers' theater sets, *TIME* Secondary Science series, and Hampton Brown's *Picture It!* The CRC was operational on the first day of classes in Year 4 and all teachers, regardless of MCLA participation, were permitted to use the resources.

One of four schools furnished evaluators with logs that indicated how many teachers borrowed CRC materials. In Year 4, 10 (25%) of the 40 MCLA participants at School A borrowed a total of 28 resources from the repository. At this school, one teacher checked out 11 (39.2%) of the 28 resources, which were National Geographic *Reading Expeditions* sets for the physical sciences. Other teachers there borrowed materials such as *Picture It*!, TCM kits by the company Teacher Created Materials that contained readers' theater scripts, and a themed set called *Extreme Weather*.

Overall, ratings of teachers' CRC use provided by the literacy coaches indicate low levels of use in Year 4. Of the 83 teachers for whom coaches assigned fidelity of implementation level ratings (described in greater detail momentarily), 34 (41%) participants did not use the CRC at all, 24 (or 28.9%) had low levels of use, 17 (20.5%) had medium levels of use, and seven (9.6%) teachers used the CRC to a high degree. According to the information provided by coaches, approximately 85.3 percent of MCLA participants from School A, 66.7 percent of participants from School C, 33.3 percent of participants from School H, and 38.5 percent of participants from School L used the CRC at least once during Year 4. These coach ratings were corroborated by the checkout logs that were provided by one school (School A).

Literacy Coaching Support

During the 2009–2010 school year, the team of six literacy coaches recorded daily tasks in logs that were designed jointly with RBS and the grant director. The coaching daily activity sheet (CDAL) included twelve categories of tasks that coaches might typically perform, such as conducting observations or conferencing with teachers. Evaluators entered and coded the information into Excel and SPSS databases (See the Appendix O for the instrument). Table V-7 shows the number of CDALs submitted by each coach and the corresponding percentage of total

working days that the number of logs represents. The percentage is based on a 190-day year, or the number of days in the school year plus two weeks before the start of school during which coaches worked with other school staff members to prepare for the students' return. Only logs containing specific tasks were counted; logs indicating leave time (i.e., sick, vacation, or personal time) were excluded from the analysis. In all, coaches submitted a total of 667 daily logs in Year 4.

Six coaches provided support to teachers at the four Cohort 2 schools. Two onsite coaches worked in School A; one onsite coach worked in School C; a floating literacy coach divided her time among three schools (Schools C, H, and L); one onsite coach worked at School H; and a sixth coach (the grant director) stepped in to provide coaching support at School L following a coach's resignation. The floating coach also provided support to teachers at School L.

Table V-7: Numbers of Daily Logs Submitted by Coaches in Year 4 (*N* = 667)

	#	% of Workdays Documented
School A		
Onsite coach 1	150	78.9
Onsite coach 2	132	69.5
School C		
Onsite coach	124	65.3
Floating coach*	13	6.8
School H		
Onsite coach	151	79.5
Floating coach*	59	31.1
School L		
Coach†	10	5.3
Floating coach*	28	14.7

Data source: MCLA Literacy Coach CDALs, 2009–2010
** Represents the same individual*
† The coach did not work full-time onsite

Researchers entered 4,085 individual task items from the 667 CDALs submitted by coaches. Table V-8 summarizes the types of activities logged. Administrative tasks (*N* =1,188) accounted for 29.1 percent of the 4,085 tasks logged, followed by non-MCLA school-related tasks (19.1%), and activities related to training or meeting with teachers (17.5%). It is important to note that for every interaction "of substance" between coach and teacher, there are corresponding administrative tasks (such as delivering MCLA supplies or paperwork, scheduling meetings, maintaining the CRC, and photocopying MCLA-related materials). Professional development for the literacy coaches in Year 4 included, but was not limited to, the following: *READ 180* network meetings, an all-day session about teacher-created supplemental instructional materials, a technology training, and sessions with the MCLA developer to review classroom action plans. Approximately 19 percent of coaches' tasks involved non-MCLA school-related tasks, such as assisting with administering the state test or helping with school security during arrival and

dismissal times. (This percentage increased from 16.5 percent of all tasks logged in the previous school year, which is not shown in the table.) The fourth-most commonly logged type of task was helping teachers prepare for class (6.7%), followed by performing MCLA-related school tasks, such as recruiting program participants (6.5%). Coaches logged fewer instances of tasks related to classroom observation (5.7%), in-class assistance (5.1%) (e.g., substituting for the main teacher) and performing tasks related to this evaluation (2.1%). Lastly, tasks related to the evening professional development course (1.2%), modeling lessons (0.3%), and videotaping teachers (0.2%) consumed a very small percentage of coaches' overall tasks documented.

Table V-8: Types of Coaching Tasks Recorded, Year 4

Task Type	Year 4 (*N* = 4,085)	
	Frequency	%
Coach administrative task	1,188	29.1
Non-MCLA school tasks	781	19.1
Trained or met with teachers	715	17.5
Helped teacher prepare for class	274	6.7
MCLA-related school tasks	266	6.5
Coach Professional Development	265	6.5
Observed teacher	232	5.7
Assisted teacher in other ways during class	210	5.1
SR Evaluation tasks	87	2.1
Related to teaching evening course	44	1.2
Modeled lesson	14	0.3
Videotaped	9	0.2
Total	**4,085**	**100**

Data source: MCLA Literacy Coach CDALs, 2009–2010

Coaches' *READ 180* Tasks

In Year 4, coaches described 233 tasks that were related to the *READ 180* (targeted) intervention, accounting for 5.7 percent of the total 4,085 activities logged (not shown in table). The percentage of tasks devoted to *READ 180* was lower than with Cohort 1 teachers: *READ 180* tasks comprised 12.5 percent of coaching tasks in Year 1 (or 447 of 1,804 overall tasks) and 10.4 percent in Year 2 (or 600 of 5,791 total tasks logged). The proportion of tasks devoted to *READ 180* in Year 4 was approximately the same as in Year 3, when *READ 180* tasks consumed 4.3 percent (or 215 of 4,085) overall tasks logged. *READ 180* tasks included observing and providing feedback to *READ 180* teachers, providing them with materials, and attending meetings and training sessions related to the program.

Coach Availability

RBS assessed coaching dosage and availability in Year 4 using three methods: (1) a review of entries in the coaching logs that referenced specific teachers' names, (2) weekly surveys

administered during the fall semester, and (3) a survey administered at the end of the spring semester.

First, RBS calculated the number of times each MCLA teacher appeared by name in the Year 4 coaches' logs and the number of times they were referenced in a substantive or meaningful way (e.g., working with the coach on lesson plans rather than on administrative tasks). It is important to note that since 2,979 (72.9%) of 4,085 tasks logged did not include a specific teacher's individual name and evaluators could not locate an identification number for a handful of teachers in the dataset, the analysis underestimates the number of teachers whom coaches served. The proportion of tasks associated with a specific teacher represents only one-third of all tasks logged; however, analyzing entries that describe identified teacher participants nevertheless yields rich insight into the "dosage" of coaching provided.

Table V-9summarizes the number of MCLA teachers by school who appeared substantively in the coaching logs 10 or more times, considered by RBS to represent adequate or "high" coaching dosage as part of the whole-school intervention. In addition, the table summarizes the median numbers and ranges of teachers whom coaches served in Year 4. The percentage of teachers receiving a high coaching dosage was highest in Schools C and A, at 63.6 percent and 53.8 percent, respectively. One of these schools was large, while the other relatively small. While 22.2 percent of teachers at School H received a high coaching dosage, none of the teachers at school L received a high coaching dosage according to the coaches' log entries and RBS criteria. In all, 36.2 percent of the 94 total Year 4 MCLA participants received high levels of coaching support according to the manner in which coaches described the support in coaching logs. Perhaps coaches focused on providing more intensive support to those individuals who they judged had a greater need for coaching support than other teachers.

Readers should know that while coaches encouraged teachers to collaborate, the level of participation/involvement was the teachers' prerogative; some teachers may not have sought coaching assistance and therefore received a low dosage of coaching support. Moreover, the coach's record-keeping style or level of specificity in documenting teacher-level interactions affected the analysis because tasks described without teacher names in the logs were not included in the teacher-level frequencies reported. As a result, the number of participants reported to have received high levels of coaching is likely to be understated. Nevertheless, the mean number of times that identified teachers were documented in the CDALs was as high as 18 at school C and as low as 3 at school L.

Table V-9: Numbers and Percentages of MCLA Teachers with High* Coaching Dosage, Year 4

	MCLA Year 4 Completers at School	Teachers in Coach Log	Number of Times Teachers Were Recorded by Name in Log		Teachers Receiving High Coaching Dosage*	
	#	#	median	range	#	%
School A	40	39	12	2 to 23	21	53.8
School C	11	11	13	2 to 44	7	63.6
School H	28	27	9	1 to 41	6	22.2
School L	15	15	2	0 to 9	0	0
Total	**94**	**92**			**34**	**36.2**

Data source: MCLA Literacy Coach CDALs, 2009–2010
** Appearing ≥ 10 times in log in substantive activities with coach*

In fall 2009, RBS collaborated with MCLA instructors to administer a Weekly Implementation of Literacy Activities (WILA) survey that asked teacher participants to provide self-reports of information about a range of activities, including whether or not a teacher worked with the literacy coach in the past seven days. (The survey's other foci will be reviewed momentarily.) All 93 (100%) MCLA participants in the fall completed at least one survey over the six-week period; however, most respondents completed five (32.3%), six (22.6%), or seven (11.8%) checklists over time. One-third (33.3%) of respondents completed four or fewer checklists. (See Appendix P for the instrument and full report that presents all results.)

Seventy-seven (82.8%) of the fall MCLA participants completed checklists frequently enough to allow for a comparison of results at three different time points. RBS analyzed the responses of teachers who completed checklists at either weeks three or four (baseline), five or six (midterm), and weeks eight or nine (follow-up). Results show that the percentage of respondents reporting meeting with a literacy coach in the prior seven days increased over time: 44.2 percent (34 of 77 teachers) had met with the literacy coach at baseline, compared with 74 percent at midterm (57 teachers), and 75.3 percent (58 teachers) at follow-up.

In spring 2010, RBS administered a final survey to teachers at the closing MCLA ceremony to gauge perceptions about various aspects of the program, such as the extent to which participating in MCLA helped respondents to integrate literacy into lessons more often than had they not participated. A total of 44 spring MCLA participants (57.1% of 77 MCLA completers) responded to the survey. Evaluators asked respondents how often they worked with an MCLA literacy coach during the school year using a five-point scale ranging from "never" to "every week" (see Appendix Q for the instrument.) The phrase "working with a coach" was defined as "having a meeting, discussed, or created a classroom action plan together, or collaborated in some other way."

Results shown in Table V-10 show that over three-quarters (77.3%) of respondents reported working often with the literacy coach during Year 4. Teachers self-reported information reinforces the finding that activity documented in coaching logs underestimates the full range of support that coaches provided. Additional information not shown in the table indicates that each

(100%) of the survey respondents who answered three additional questions about the coaches (N = 42) agreed that her coach's advice was helpful and that the coach was willing to help the teacher as requested.

Table V-10: Teachers Self-Reported Frequencies of Meeting with Coaches during School Year by School (N = 44)

	Every Week		Often		Sometimes or Rarely	
	#	%	#	%	#	%
School A	2	9.5	18	85.7	1	4.8
School C	0	0.0	11	100.0	2	0.0
School H	4	23.5	2	64.7	0	11.8
School L	0	0.0	3	75.0	1	25.0
Totals	**6**	**13.6**	**34**	**77.3**	**4**	**9.1**

Data source: RBS Participant Feedback Survey, spring 2010

Classroom-Level MCLA Implementation

In addition to capturing data about relationships with literacy coaches, the WILA surveys offer insight into teachers' self-reported classroom-level implementation of MCLA strategies. Survey items were aligned with dimensions described in the IC Map and reflected key activities that MCLA developers identified as crucial to successful classroom literacy integration. (As indicated previously, see Appendix P for the WILA instrument and expanded summary report). The survey asked teachers if in the past seven days they had met with a literacy coach, received feedback from an administrator regarding literacy integration, or had used any specific literacy strategies they learned in MCLA. Respondents were also asked the extent to which they had assisted students during implementation of any of those strategies. Finally, each week, teachers were asked if they had engaged in any of the six activities, including assigning students to cooperative groups, pre-assessing students' content knowledge, and meeting with grade-level colleagues during the school day to integrate literacy into lessons.

Table V-11 summarizes the number and percentage of the 77 respondents who reported that they engaged in activities in the past seven days at the three time points. At baseline, respondents were most likely to report that they had put students into cooperative groups with assigned roles (72.7%), that they had informally assessed their students' use of an MCLA strategy (67.5%), and that they had pre-assessed their students' content knowledge (70.1%). Over time, baseline to follow-up increases were noted in the percentage of teachers who reported that they formally assessed strategy use (a change from 25.9% to 75.3%), met with literacy coach in school (a change from 44.2% to 75.3%), and received feedback from an administrator with regard to literacy instruction (a change from 14.3% to 24.7%). Receiving feedback from an administrator was the least frequent activity reported by teachers at all three-time points.

RBS conducted an analysis of variance (ANOVA) to determine whether the average number of activities reported by each teacher (between zero and eight) was statistically different at the

three different time points. The test revealed no statistical difference in the average number of activities reported by the 77 teachers at the different time points ($p < .05$); however, results show that two of the eight activities were reported at significantly higher rates over time: teachers' meeting with literacy coach ($p < .05$) and preassessing the student content knowledge ($p < .05$).

Table V-11: Numbers and Percentages of Respondents Reporting Engagement in Various Activities in the Past Week, Fall 2009 ($N = 77$)

	Baseline		Midterm		Follow-up	
	#	%	#	%	#	%
Put Students into Cooperative Groups	56	72.7	50	64.9	50	64.9
Informally Assessed Students' Strategy Use	52	67.5	50	64.9	49	63.6
Preassessed Students' Content Knowledge	54	70.1	43	55.8	58	75.3
Met with Literacy Coach	34	44.2	57	74.0	58	75.3
Formally Assessed Students' Strategy Use	20	25.9	27.0	35.1	58	75.3
Identified a Specific MCLA Strategy Used in Class	44	57.1	46	59.7	42	54.5
Met with Grade-Level Colleagues	39	50.6	42	54.5	42	54.5
Received Feedback from Administrator about Literacy Strategies	11	14.3	18	23.4	19	24.7

Data source: RBS WILA Survey, fall 2009

Evaluator Observations

In addition to collecting teachers' self-reported perceptions about implementation, RBS observed 51 of the MCLA participants in Year 4 (representing 54.2 % of fall participants and 66.2% of spring participants). More specifically, staff conducted observations of classes taught by MCLA teachers in October 2009 ($N = 36$ two-day class sessions and 6 one-day class sessions) and May 2010 ($N = 32$ one-day observations) to determine the extent to which teachers used strategies with students. In all, 74 lessons were observed in Year 4. Observers had completed one and a half days of training using videos featuring MCLA teachers implementing literacy strategies with students as well as a set of exercises that offered practice in note-taking, coding, and protocol completion. At both waves of data collection, observers conducted pre- and post-observation interviews with teachers to ascertain the context of lessons and the extent to which teachers perceived that lesson objectives had been met and to discuss next steps for class instruction. The observers used the RBS MSR Classroom Observation Protocol to document basic classroom characteristics (i.e., number of students, grade level, and content area) and the instructional and literacy strategies observed in ten-minute intervals. (See Appendix R for the instrument and annotated guide.)

In addition to documenting the use of literacy strategies, observers were presented with a set of scenarios culled from descriptions of previously observed lessons to depict what observers would be likely to see. Evaluators demonstrated their ability to measure a lesson's cognitive demand using a six-point scale based on Anderson and Krathwohl's (2001) revised version of Bloom's taxonomy of educational objectives. The scale includes the following levels, ranging from lowest to highest: (1) Remember; (2) Understand; (3) Apply; (4) Analyze; (5) Evaluate; and

(6) Create. To ensure that evaluators had a consistent understanding of the construct, significant time was spent reviewing and clarifying the rationale for assigning various ratings. Evaluators also designed and assigned ratings to additional two tasks and provided a rationale for ratings assigned to demonstrate their ability to adequately rate this dimension.

RBS did not observe any lessons at a level of five or higher; observers noted components of a lesson that often required students to apply a procedure, such as synthesizing information from text into a graphic organizer. The observed cognitive demand level of lessons is elaborated upon in the results section below.

Table V-12 summarizes the characteristics of the 51 teachers whom RBS observed in either the fall or spring of Year 4. As the table shows, eight in ten (82.4%) observed teachers were female, 70.6 percent were African American, and 60.8 percent had their professional teacher's license (a figure that likely underestimates the proportion of teachers with full licensure due to missing survey data for this measure). An RBS cluster analysis of coaches' assigned fidelity of implementation ratings found that 47.1 percent of observed teachers were rated as low-fidelity implementers, 27.5 percent were at medium fidelity levels, and one-quarter (25.5%) were at high-implementation-fidelity levels. Approximately 45 percent of the 51 observed teachers achieved a level of cognitive demand associated with application of concepts (level 3) and one-third (33.3%) reached a level where students were required only to understand concepts/material (level 2), while 19.6 percent of observed teachers achieved a level where students were expected to analyze information (level 4) presented during the lesson. Only one teacher (2.0%) failed to raise the cognitive demand level of the observed lesson beyond asking students to remember information (level 1).

RBS included 42 fall classes and 30 spring classes in the final observation analysis after it deemed four observed special education inclusion classes ineligible for the study. Observers recorded a total of 633 strategies, or "episodes" of literacy across all observations. Table V-13 summarizes the percentage of strategies employed by observed teachers and categorizes them into the three primary domains around which MCLA developers have designed the professional development model: strategies aiming to improve students' vocabulary, comprehension, and fluency. Strategies that target more than one domain were coded as vocabulary/comprehension (i.e., from graphic organizers) or fluency/comprehension (e.g., reader's theater activities).

Table V-12: Characteristics of Observed Teachers and Highest Cognitive Demand Level Measured, Year 4 (*N* = 51)

	Number	Percent		Number	Percent
Gender			**Race/Ethnicity**		
Female	42	82.4	Black, non-Hispanic	36	70.6
Male	9	17.6	White, non-Hispanic	6	11.8
			Unknown	9	17.6
Teaching Licensure					
Professional	31	60.8	**Grade Level Observed**		
Alternative	5	9.8	ELA	13	25.5
Apprentice	4	7.8	Mathematics	10	19.6
Interim/Other	3	5.9	Social Studies	10	19.6
Unknown	8	15.7	Science	7	13.7
			Other	11	21.6
Implementation Level					
Lowest	24	47.1	**Education Level**		
Medium	14	27.5	BA + 15 credits	10	19.6
Highest	13	25.5	MA	13	25.5
			MA + 15 credits	17	33.3
Highest Cognitive Demand Level Measured during Lesson			Ed. Specialist	3	5.9
			Unknown	8	15.7
1. Remember	1	2.0			
2. Understand	17	33.3			
3. Apply	23	45.1			
4. Analyze	10	19.6			

Data sources: RBS classroom observations, 2009–2010 and RBS TISQU survey, 2010

Findings summarized in Table V-13 suggest that teachers who used multiple strategies tended to tap all three domains (vocabulary, fluency, and comprehension) with less emphasis on writing. More specifically, results from the analysis indicate that the percentage of vocabulary, fluency, and comprehension strategies used during observed lessons was relatively even: 28.1 percent of strategies related to fluency, 29.9 percent related to comprehension, and 27.0 percent were a mix of vocabulary and comprehension (e.g., using graphic organizers). Observers coded only four (0.6%) instances of substantive writing aimed at integrating literacy in the lesson.

Table V-13: Percentages of Literacy Episodes Observed by Strategy Domain and Semester, Year 4 (*N* = 633*)

Strategy Domain	Fall	Spring	Total
	%	%	%
Vocabulary	14.4	13.3	14.1
Fluency	26.0	32.8	28.1
Comprehension	30.4	28.7	29.9
Vocabulary/Comprehension†	28.1	24.6	27.0
Fluency/Comprehension‡	0.5	0.0	0.3
Writing	0.7	0.5	0.6
Total	**100.0**	**100.0**	**100%**

Data source: RBS classroom observations, October 2009 and May 2010
** 438 episodes were recorded across 42 fall observations, and 195 episodes were recorded across 30 spring observations*
† *Includes the Frayer Model and other graphic organizers*
‡ *Includes reader's theater.*

Although teachers employed a wide variety of literacy strategies, they most commonly used graphic organizers, read text aloud, engaged students in choral reading, or connected text to life in discussions during observed lessons. As Table V-14 shows, teachers used graphic organizers in over two-thirds (68.1%) of the observed lessons in Year 4. The least commonly used strategies were a visualization (*N* = 1) technique and oral retelling (*N* = 1), two strategies intended to improve students' comprehension of text. Evaluators did not capture teachers using the question-answer-relationship (QAR) strategy on the day of observations, unlike during the previous school year. Moreover, although teachers were discouraged from using "popcorn reading" activities in which students read aloud solo, observers documented six classes using this approach in the fall (not shown in the table).

Table V-14: Numbers and Percentages of Lessons Observed with Various Literacy Strategies Used during Observation, Fall and Spring in Year 4 (*N* = 72)

	Fall 2009 (*N* = 42 lessons)		Spring 2010 (*N* = 30 lessons)		Year 4 Totals	
	#	%	#	%	#	%
Graphic organizer	30	71.4	19	33.3	49	68.1
Teacher reads aloud	27	64.3	20	66.7	47	65.3
Choral reading	17	40.5	13	43.3	30	41.7
Connecting text to life	15	35.7	7	23.3	22	30.6
Monitoring understanding of text	12	28.6	10	33.3	22	30.6
Repeated reading	10	23.8	6	20.0	16	22.2
Activating prior knowledge	10	23.8	6	20.0	16	22.2
Previewing text	12	28.6	3	10.0	15	20.8
Frayer Model	12	28.6	3	10.0	15	20.8
Pre-teaching vocabulary	7	16.7	5	16.7	12	16.7
Questioning for purpose	6	14.3	6	20.0	12	16.7
Interactive word wall	7	16.7	4	13.3	11	15.3
Glossary use	5	11.9	3	10.0	8	11.1
Semantic features analysis	6	14.3	5	16.7	11	8.3
Students generating questions	2	4.8	3	10.0	5	6.9
Etymology	4	9.5	0	0.0	4	5.6
Shared writing	3	7.1	1	3.3	4	5.6
Context clue	3	7.1	1	3.3	4	5.6
Journal or Blog Use	2	4.8	2	6.7	4	5.6
Reader's theater	2	4.8	0	0.0	2	2.8
Reflection	1	2.4	1	3.3	2	2.8
Word sort	1	2.4	1	3.3	2	2.8
Direct Instruction	1	2.4	1	3.3	2	2.8
Think-Pair-Share	1	2.4	1	3.3	2	2.8
Retelling	1	2.4	0	0.0	1	1.4
Paired or buddy reading	0	0.0	1	3.3	1	1.4
KWL	0	0.0	1	3.3	1	1.4
Visualization	1	2.4	0	0.0	1	1.4
Oral Retelling	1	2.4	0	0.0	1	1.4

Data source: RBS Classroom Observation Protocol, 2009–2010

Literacy Coach Ratings of Teacher Implementation

In Year 4, MCLA literacy coaches maintained portfolios of teachers' work and other documentation that included evidence sheets used by coaches during classroom observations, teachers' instructional materials, student work artifacts, and lesson plans. The repository of information served as evidence upon which coaches drew to indicate a teacher's level of MCLA implementation fidelity. At the end of the school year, RBS convened a working session with

five of the six literacy coaches for the purpose of assigning MCLA implementation ratings for individual Cohort 2 teachers on a subset of components using descriptions in the IC Map; the coaches were encouraged to cull evidence from the portfolios during the session to support their ratings.

RBS selected six domains from the IC Map that reflected implementation fidelity areas that coaches were uniquely positioned to rate by virtue of frequent teacher interactions and observations. RBS facilitated coaches' assignment of teacher ratings using the adapted rubric included in Appendix S, which described variations in implementation from the optimal level of MCLA strategy implementation, as designated by developers, to a minimal level of implementation. The six domains reflect the extent to which coaches observed teachers: (1) introducing strategies and describing its purpose when used; (2) consistently modeling the use of a strategy; (3) providing multiple guided practice activities using a variety of texts; (4) providing opportunities for students' independent practice of strategies; (5) differentiating instruction based on analysis of progress monitoring; and (6) revisiting previously introduced literacy strategies and applying them to new material.

The literacy coaches assigned fidelity ratings for 83 of 94 teachers with whom they worked during the 2009–2010 school year. Table V-15 summarizes the number and percentage of teachers rated at various levels of implementation for each of the six dimensions after two years of MCLA participation. Implementation levels ranged from low to high, with the number of levels varying dependent upon the component. Results show that coaches' ratings of individual teachers were distributed widely across implementation domains; however, a cluster analysis showed that coaches rated over half (53%) of the 83 teachers as low-fidelity implementers, while they rated 26.5 percent as medium-fidelity implementers and 20.5 percent as high-fidelity implementers. Findings suggest that the IC Map is an effective framework for distinguishing among different levels of fidelity.

Table V-15: Numbers and Percentages of Teachers Rated at Various Implementation Levels by Literacy Coaches by School in Year 4 (*N* = 83)

	Numbers of Teachers Rated During 2009–2010	Percentages of Teachers by Implementation Level		
		Low	Medium	High
School A	34	41.2	29.4	29.4
School C	9	55.6	33.3	11.1
School H	27	51.9	29.6	18.5
School L	13	53.8	30.7	15.4
All Schools	**83**	**53.0**	**26.5**	**20.5**

Data source: RBS Literacy Coach IC Map rating tool, 2010

Table V-16 summarizes the percentage of teachers with ratings by school and specific IC map domain, such as the fidelity with which coaches felt teachers differentiated instruction or introduced and revisited literacy strategies. Results suggest a trend in which teachers from

School A tended to earn higher implementation fidelity ratings than teachers from other schools. Generally, it seems that teachers at two schools struggled most with differentiating instruction, and one coach rated a majority (85%) of School H teachers as low-fidelity in this area.

Table V-16: Percentages of Teachers Rated at Various Implementation Levels by Literacy Coaches in Year 4 (*N* = 83)

	School A (*n* = 34)	School C (*n* = 9)	School H (*n* = 27)	School L (*n* = 13)	All Teachers (*N* = 83)
Introduce Strategy					
lowest (%)	2.9	22.2	25.9	30.8	16.9
medium (%)	47.1	44.4	40.7	38.5	43.4
highest (%)	50.0	33.3	33.3	30.8	39.8
Model Strategy					
lowest (%)	0.0	11.1	37.0	23.1	16.9
medium (%)	23.5	33.3	25.9	38.5	27.7
med/higher (2.5)	2.9	0.0	0.0	0.0	1.2
higher (%)	29.4	55.6	25.9	23.1	30.1
highest (%)	44.1	0.0	11.1	15.4	24.1
Use Guided Practice					
lowest (%)	11.8	0.0	29.6	38.5	20.5
medium (%)	29.4	55.6	29.6	23.1	31.3
higher (%)	32.4	33.3	22.2	23.1	27.7
highest (%)	26.5	11.1	18.5	15.4	20.5
Encourage Independent Use of Strategies					
lowest (%)	14.7	33.3	33.3	30.8	25.3
medium (%)	50.0	44.4	40.7	46.2	45.8
highest (%)	35.3	22.2	25.9	23.1	28.9
Differentiate Instruction					
lowest (%)	32.4	11.1	85.2	46.2	49.4
medium (%)	41.2	55.6	11.1	23.1	30.1
highest (%)	26.5	33.3	3.7	30.8	20.5
Revisit Strategies					
lowest (%)	20.6	11.1	48.1	38.5	31.3
medium (%)	29.4	44.4	18.5	23.1	26.5
med/higher (2.5)	2.9	0.0	3.7	0.0	2.4
higher (%)	14.7	33.3	14.8	38.5	20.5
highest (%)	32.4	11.1	14.8	0.0	19.3

Data source: RBS coaching rubric adapted from the MSRP IC Map, Year 4

Summary of Implementation Findings for the Whole-School Intervention

In Year 4 of the MSRP, developers provided 42.5 hours of out-of-school professional development to teacher participants to implement five lessons that integrated specific literacy practices before, during, and after reading as well as two poster presentations of exploratory

research findings to colleagues. Literacy coaches helped teachers complete the assignments through feedback provided in debriefing conferences, classroom observations, and a wide range of other general support activities. In addition to coaching assistance, teachers were encouraged to use materials and resources from an on-site curriculum library maintained by the literacy coaches.

RBS tracked attendance at the MCLA evening classes to determine individual and schoolwide program participation in the four schools receiving the intervention in Year 4. Approximately 82 percent (N = 77) of the 94 fall-enrolled teachers completed the yearlong professional development intervention. Teachers who attended and completed the courses tended to have high levels of course participation: 55 (71.4%) of the 77 teachers who completed both semesters attended 80 percent or more of classes; however, only 58.5 percent of all *originally* enrolled teachers achieved high course participation.

Although course attendance was generally high among completers, enrollment in MCLA across the four schools varied widely, as in previous years: nearly three-quarters (72.7%) of eligible teachers participated in one school, compared with 44 percent of eligible teachers in another school in fall 2009.

RBS assigned an implementation rating to each school using a formula that takes into account teachers' course attendance, participation with literacy coaches, and the number of eligible teachers who opted not to participate in the program. All MCLA-eligible staff members in the school were assigned one of four numerical ratings depending on how many MCLA professional development sessions they attended in fall 2009 and spring 2010. Teachers' attendance rates in the fall and spring were averaged for an overall attendance rate; for example, a teacher with 100 percent fall course attendance who dropped the course before the spring semester began received a "0" for spring and an average of 50 percent attendance overall. Eligible teachers who did not participate in MCLA received an attendance rate of "0." The ratings are as follows: teachers who attended 25 percent or fewer of the sessions were given a "1," those attending between 26 and 50 percent of the professional development offered were assigned a "2," teachers participating in between 51 and 75 percent of the professional development offered received a "3," and those who attended 76 to 100 percent of the professional development offered were given a rating of "4."

Other implementation ratings were assigned to the four MCLA schools, including a coaching dosage score, principal involvement rating, use of materials score, and teacher implementation score. The percentage of MCLA teachers with high coaching dosage was determined by the percentage of teachers who worked with the coaches 10 or more times during the school year in a substantive way according to data provided in weekly coaching logs. A principal involvement score of "4" was assigned to each school since three of four principals attended all fellowship classes and two key MCLA events and one principal attended all but one fellowship session. The use of materials rating is determined from a teacher-level use rating assigned by the literacy coaches and follows the same scale that was used to rate course participation scores (and includes non-MCLA participants). The teacher implementation score was derived from individual-level ratings of teacher implementation assigned by coaches that were aggregated to

the school level and based upon mean scores between "1" and "4." Finally, the school's implementation rating is a composite score based on the previous measures.

Once the above ratings were tallied, RBS calculated an average score for each MCLA school and assigned it one of four corresponding schoolwide implementation ratings:

1 = minimal program implementation

1.1 to 2 = low implementation

2.1 to 3 = medium implementation

3.1 to 4 = high implementation

Table V-17 summarizes these implementation ratings as well as the number and percentage of participants in the intervention by school for Year 4. Results show a low to medium level of implementation at each of the four Striving Readers schools, ranging from 2.54 at School A to 1.91 at School L. As shown, the percentage of eligible teachers completing both semesters of MCLA in Year 4 was 60 percent at School A, 24 percent at School C, 54.2 percent at School H, and 53.5 percent at School L. RBS calculated the professional development score ("PD score for participants") for each school by first by assigning a teacher-level attendance score to MCLA participants (using the method previously described where attendance of 75% or more of the sessions resulted in a score of 4) and then calculated the mean attendance score for all MCLA participants in the school. A separate PD score was calculated that included non-MCLA participants who were assigned a "0" score for MCLA attendance.

RBS calculated the aggregated high coaching dosage score by first assigning a score of "1" to all teachers in the school who were documented 10 or more times in coaching logs. RBS assigned a score of "0" to all teachers (including non-MCLA participants) who did not work with the coach 10 more times. RBS then calculated a mean between 0 and 1 for each school, which represented the percentage of all teachers at that school who received a high dosage of coaching support. For example, of the 55 eligible teachers at School A, 22 (40%) teachers received a high coaching dosage (as indicated by the coaching logs). Finally, RBS assigned an aggregate school high coaching dosage score of "2" to represent the 40 percent of teachers falling into the overall typology of participation where "1" = "25 percent or fewer," "2 = between 25 percent and 50 percent," "3 = between 51 and 75 percent," and "4 = between 76 percent and 100." At School C, 28 percent of the 25 eligible teachers received a high dosage of coaching support, and therefore earned an aggregate school score of "1." The scores for Schools H and L were "1" and "1" respectively, because of the relatively large numbers of non-MCLA participants at their schools.

The aggregated score for coaches' school-level implementation ratings were calculated as follows: coaches provided a total of 83 ratings for teachers (34 from school A; 9 from School C; 27 from School H; and 13 from School L). Teachers received a rating of 1 (low), 2 (medium) or 3 (high). RBS calculated the mean rating for all teachers in the school with implementation ratings. For example, in School A, the mean rating for the 34 teachers was 1.89.

As previously mentioned, principal involvement was deemed high in all four schools, since attendance at 75 percent of the sessions or higher indicated high attendance. RBS calculated the "materials use" rating by analyzing teacher-level scores that were assigned by coaches and

calculating the mean score for each school (which again, includes non-MCLA participants). RBS assigned two of the schools a score of "2" which indicates that between 25 percent and 50 percent of the teachers had a usage level above "low use" and two of the schools earned a score of "1," which indicates the schools' use of CRC materials was low.

Table V-17: Schoolwide MCLA Participation and Implementation Rankings, Year 4

	School A	School C	School H	School L
Number of Eligible Teachers in Fall 2009	55	25	48	28
Percent of Eligible Teachers Participating in MCLA	72.7	44.0	56.3	53.5
Number Completing MCLA, Fall Semester (*N* = 93)	40	11	27	15
Number Completing MCLA, Spring Semester (*N* = 78)	33	6	24	15
Number (%) of Teachers Completing ***both*** Semesters (*N* = 77)	33 (60%)	6 (24%)	23 (54.2%)	15 (53.5%)
PD Score for Participants*	3	1	3	3
PD Score including Nonparticipants	2.79	1.00	2.02	2.00
Coaching High Dosage Score†	2 (42.3 %)	2 (28%)	1 (12.7%)	1 (0%)
Coach's Implementation Rating (Aggregated)‡	1.89	1.33	1.55	1.54
Principal Involvement Rating	4	4	4	4
Materials Use Rating§	2	2	1	1
School's Implementation Rating (includes nonparticipants)	**2.54**	**2.11**	**2.11**	**1.91**

Data sources: MCLA attendance records, CDALs, RBS Literacy Coach IC Map Rating Tool

** 1 = < 25% had high attendance, 2 = 26%–50% had high attendance, 3 = 51%–75% had high attendance, and 4 = > than 75% had high attendance*

† *Score is based on the percentage of all teachers (as of fall 2009) who received high levels of coaching. Aggregate score includes non-MCLA participants who received no coaching where 1 = < 25% of teacher had high levels of coaching, 2 = 26%–50 % had high levels of coaching, 3 = 51%–75% had high levels of coaching, and 4 = > than 75% had high levels of coaching.*

‡ *Based on* N = *83 teachers for whom coaches assigned ratings. RBS calculated the mean score based upon teacher-level scores where coaches provided ratings of 1 = low, 2 = medium, and 3 = high fidelity of implementation.*

§ *Materials use is determined using coaches' scores for participants, where 1 = low and 2 = medium use.*

Figure V-3: Characteristics of Year 4 RBS Data-Collection Methods

Data Collection Method and Topic	Date Conducted	Sample size*
Surveys		
Follow-up characteristics and content knowledge—all content teachers	May 2010	*N* = 214 (or 98.1% of the 233 non-administrators in all 8 Striving Readers schools)
WILA Survey	Fall 2009	*N* = 93 (100%) MCLA participants completed at least one survey. A total of 77 (82.8%) of the MCLA teachers completed surveys at baseline, mid-term, and at follow-up.
Feedback Survey (formerly entitled the pre-focus group survey)	Spring 2010	*N* = 44 (56.4% of the 78 spring semester completers)
Interviews		
Striving Readers School Principals	May 2010	*N* = 8 (100%)
Literacy coaches	May 2010	*N* = 6 (100%)
Observations		
READ 180 classrooms	October 2010 May 2010	*N* = 15 (93.8%) *N* = 15 (93.8%)
MCLA Classrooms	October 2009 May 2010	*N* = 81 (87.1% of 93 MCLA teachers) *N* = 31 (39.7% of 78 MCLA teachers)
Student assessment		
Baseline ITBS†	Fall 2009	*N* = 1,350 (sixth graders only)
Follow-up ITBS†	Spring 2010	*N* = 3,907 (all students)
Secondary Data		
MCLA attendance rosters, *READ 180*meeting attendance sheets	Year 4	All available data
Coaching calendar and log entries	Year 4	*N* = 6 coaches (100%)
TCAP	Spring 2010	Unknown until data are released

**Where possible, response rates are provided in parentheses.*

†These numbers include all *students who sat for the test; therefore, they do not match* N *sizes included elsewhere in this report.*

VI. Quasi-Experimental Estimations of the Impacts of the Whole-School Intervention: Years 3 and 4

During Years 1 and 2, the whole-school intervention was implemented in Cohort 1 schools, and the analysis used teachers from Cohort 2 schools as research controls; at the end of Year 2, the intervention ended in Cohort 1 schools. During Years 3 and 4, the intervention was implemented in Cohort 2 schools. The experimental phase of the whole-school intervention has ended, so no experimental impacts are presented in this report. However, exploratory analyses were carried out in an attempt to estimate any improvements in student reading achievement in the Cohort 2 schools at the end of Year 4 that might be attributable to the whole-school intervention.

The quasi-experimental designs used compare the performance of students enrolled in the Cohort 2 schools at the end of Year 4 to the performance of students enrolled in the Cohort 2 schools at the end of Year 2. The strength of this design is that each school serves as its own "control." The weakness is that most of the students enrolled at the end of Year 4 are different from those enrolled at the end of Year 2. (The only students who were enrolled in both periods are the eighth-grade students in Year 4 who were in sixth grade in Year 2.) As in the impact analyses of MCLA in Years 1 and 2, the students who were included in the analytical samples were those who had been enrolled in one of the four Cohort 2 schools for a majority of instructional days in Years 2 or 4 for sixth-grade students and in Years 1 and 2 or 3 and 4 for seventh- and eighth-grade students. Independent sample t-tests were conducted to compare performance of baseline measures between Year 2 and year 4 cohorts for each grade level as well as for the combined seventh- and eighth-grade sample. Statistically significant mean differences were detected between sixth-grade samples only. None of the mean differences at baseline were more than 25 percent of the pooled sample standard deviation. Baseline performance was used as a covariate in the specified impact models to adjust for these differences.

The ITBS Total Reading, Comprehension, and Vocabulary NCE scores obtained at the end of Years 2 and 4 were the dependent variables.[20] The evaluation year (Year 2 or Year 4) was the "treatment" variable used to represent the difference between student achievement before and after the whole-school intervention. The analytical models used to estimate this treatment effect included three types of covariates: the appropriate baseline score for each dependent variable, several student demographic characteristics (gender, whether a student was eligible for free or reduced-price lunch, English language learner status, and whether a student was African-American), and three dummy variables representing the differences among the four schools. The appropriate ITBS administrations for each year and grade are indicated in Table VI-1.

[20] TCAP scores were not available until January 2011. Results of these exploratory analyses for TCAP scores will be included in the revisions to this draft report.

Table VI-1: ITBS Administrations Providing NCE Scores for Students in Each Evaluation Year and Grade

Evaluation Year	Student Grade	ITBS Pretest Date	ITBS Posttest Date
Year 2	6	Fall 2007	Spring 2008
	7	Fall 2006	Spring 2008
	8	Fall 2006	Spring 2008
Year 4	6	Fall 2009	Spring 2010
	7	Fall 2008	Spring 2010
	8	Spring 2008	Spring 2010

Before beginning analyses to estimate the treatment effect, of MCLA, researchers compared the baseline ITBS scores of similar groups of students in Year 2 and Year 4. As shown in Table VI-2, these comparison tests show the following fairly small but statistically significant differences for sixth-grade students (only): -2.7 [$t(1117) = 2.89$, $p = .004$] on the ITBS Vocabulary, -2.8 [$t(1104) = 3.15$, $p = .002$] on the ITBS Comprehension, and -2.9 [$t(1097) = 3.30$, $p = .001$] on the ITBS Total Reading.

Table VI-2: MCLA Baseline Comparability on ITBS NCE Scores in Year 4 Compared to Year 2—Sixth-Grade Students

Test score	Means		Degrees of Freedom	t-value	Signif. Level
	Year 2	Year 4			
ITBS Total Reading	33.90	31.00	1097	3.30	0.001
	(556)*	(543)			
ITBS Comprehension	36.00	33.20	1104	3.15	0.002
	(558)	(548)			
ITBS Vocabulary	33.20	30.50	1117	2.89	0.004
	(573)	(546)			

Data sources: Years 2 and 4 demographic, pretest and posttest NCE scores of ITBS for students in Cohort 2 schools

** Numbers in parentheses are the numbers of students in each group having valid test scores from the baseline fall 2009 administration and the spring 2010 administration.*

Table VI-3: MCLA Baseline Comparability on ITBS NCE Scores in Year 4 Compared to Year 2—Seventh-Grade Students

Test score	Means		Degrees of Freedom	t-value	Signif. Level
	Year 2	Year 4			
ITBS Total Reading	33.60	33.70	846	-0.12	0.907
	(464)*	(384)			
ITBS Comprehension	35.80	35.10	890	0.74	0.462
	(467)	(425)			
ITBS Vocabulary	32.20	33.50	852	-1.28	0.203
	(470)	(384)			

Data sources: Years 2 and 4 demographic, pretest and posttest NCE scores of ITBS for students in Cohort 2 schools

** Numbers in parentheses are the numbers of students in each group having valid test scores from the baseline fall 2008 administration and the spring 2010 administration.*

Table VI-4: MCLA Baseline Comparability on ITBS NCE Scores in Year 4 Compared to Year 2—Eighth-Grade Students

Test score	Means		Degrees of Freedom	t-value	Signif. Level
	Year 2	Year 4			
ITBS Total Reading	34.30	33.00	844	1.23	0.219
	(508)*	(338)			
ITBS Comprehension	35.20	34.90	850	0.21	0.831
	(513)	(339)			
ITBS Vocabulary	34.50	32.50	862	1.84	0.066
	(521)	(343)			

Data sources: Years 2 and 4 demographic, pretest and posttest NCE scores of ITBS for students in Cohort 2 schools

** Numbers in parentheses are the numbers of students in each group having valid test scores from the baseline fall 2008 administration and the spring 2010 administration.*

Table VI-5: MCLA Baseline Comparability on ITBS NCE Scores in Year 4 Compared to Year 2—Seventh-Grade and Eighth-Grade Students

Test score	Means		Degrees of Freedom	t-value	Signif. Level
	Year 2	Year 4			
ITBS Total Reading	35.50	35.00	1742	0.63	0.531
	(980)*	(764)			
ITBS Comprehension	35.50	35.00	1742	0.63	0.531
	(980)	(764)			
ITBS Vocabulary	33.40	33.00	1716	0.51	0.608
	(991)	(727)			

Data sources: Years 2 and 4 demographic, pretest and posttest NCE scores of ITBS for students in Cohort 2 schools

** Numbers in parentheses are the numbers of students in each group having valid test scores from the baseline fall 2008 administration and the spring 2010 administration.*

Three analytic approaches were employed to estimate the evaluation year treatment effect: Ordinary Least Squares (OLS) regression analyses, analyses of simulated outcomes in both

directions, and difference-in-differences analyses. The results of the first two approaches are presented below. The difference-in-differences results are included as Appendix T. The intent is to compare the results of these different approaches. Of particular interest is the comparison of the OLS regression and the simulated-outcomes approaches. The number of students included in all of these analyses is described in Table VI-6.

Table VI-6: Number of Students in Each Evaluation Year and Grade

Evaluation Year	Grade	Number of Students
Year 2	6	779
	7	611
	8	676
Year 4	6	708
	7	527
	8	585

Data sources: Years 2 and 4 demographic, pretest and posttest NCE scores of ITBS for students in Cohort 2 schools

Variables Included in Both Analyses

The regression model and the simulated-outcomes analysis used for each of the three ITBS scores included the posttest NCE score as the dependent variable; three dichotomous (0,1) variables representing the Cohort 2 schools; a dichotomous variable representing the evaluation year (the "treatment"); four dichotomous variables representing student gender, eligibility for free or reduced-price lunch, English language learner status, and whether a student was African-American; and the baseline score for the appropriate dependent variable.

OLS Regression Analysis Results

All variables were entered into the analysis in order to facilitate the comparison of the different approaches. Tables VI-7 through VI-10 present the results for each grade separately and for seventh and eighth grades together. The results for sixth grade represent the impact of one year of enrollment in a school receiving the whole-school intervention. The results for seventh and eighth grade represent the impact of two years of enrollment.

Table VI-7: MCLA "Impact" on ITBS NCE Scores in Year 4 Compared to Year 2—Sixth-Grade Students

Test Score	Unadjusted Means		Adjusted Means		Est. Impact	Effect Size	Signif. Level
	Year 2	Year 4	Year 2	Year 4			
ITBS Total Reading	29.6 (556)*	27.8 (543)	28.6	28.9	0.3	0.02	0.624
ITBS Comprehension	32.4 (558)	30.0 (548)	31.4	31.0	-0.4	-0.02	0.607
ITBS Vocabulary	29.4 (573)	28.0 (546)	28.6	28.8	0.2	0.01	0.738

Data sources: Years 2 and 4 demographic, pretest and posttest NCE scores of ITBS for students in Cohort 2 schools

** Numbers in parentheses are the numbers of students in each group having valid test scores from the baseline fall 2009 administration and the spring 2010 administration.*

Table VI-8: MCLA "Impact" on ITBS NCE Scores in Year 4 Compared to Year 2—Seventh-Grade Students

Test Score	Unadjusted Means		Adjusted Means		Est. Impact	Effect Size	Signif. Level
	Year 2	Year 4	Year 2	Year 4			
ITBS Total Reading	32.1 (464)*	31.6 (384)	31.9	31.9	0.0	0.00	0.970
ITBS Comprehension	34.2 (467)	33.6 (425)	34.1	33.8	-0.3	-0.02	0.741
ITBS Vocabulary	31.2 (470)	31.6 (384)	31.3	31.5	0.2	0.01	0.835

Data sources: Years 2 and 4 demographic, pretest and posttest NCE scores of ITBS for students in Cohort 2 schools

** Numbers in parentheses are the numbers of students in each group having valid test scores from the baseline fall 2008 administration and the spring 2010 administration.*

Table VI-9: MCLA "Impact" on ITBS NCE Scores in Year 4 Compared to Year 2—Eighth-Grade Students

Test Score	Unadjusted Means		Adjusted Means		Est. Impact	Effect Size	Signif. Level
	Year 2	Year 4	Year 2	Year 4			
ITBS Total Reading	31.2 (508)*	33.0 (338)	31.0	33.3	2.3	0.15	0.005
ITBS Comprehension	33.0 (513)	34.2 (339)	33.1	34.0	0.9	0.05	0.331
ITBS Vocabulary	31.4 (521)	33.6 (343)	31.0	34.1	3.1	0.19	0.001

Data sources: Years 2 and 4 demographic, pretest and posttest NCE scores of ITBS for students in Cohort 2 schools

** Numbers in parentheses are the numbers of students in each group having valid test scores from the baseline fall 2008 administration and the spring 2010 administration.*

Table VI-10: MCLA "Impact" on ITBS NCE Scores in Year 4 Compared to Year 2—Seventh-Grade and Eighth-Grade Students

Test Score	Unadjusted Means		Adjusted Means		Est. Impact	Effect Size	Signif. Level
	Year 2	Year 4	Year 2	Year 4			
ITBS Total Reading	31.6 (972)*	32.3 (722)	31.5	32.4	0.9	0.05	0.135
ITBS Comprehension	33.6 (980)	33.9 (764)	33.6	33.9	0.3	0.02	0.618
ITBS Vocabulary	31.3 (991)	32.6 (727)	31.3	32.6	1.3	0.08	0.056

Data sources: Years 2 and 4 demographic, pretest and posttest NCE scores of ITBS for students in Cohort 2 schools

** Numbers in parentheses are the numbers of students in each group having valid test scores from the baseline fall 2008 administration and the spring 2010 administration.*

The estimated impact of the whole-school intervention was not significant (p0.05) in any grade except eighth. For eighth-grade students, the Year 4 results were significantly better than in Year 2 for total reading and vocabulary. The effect sizes approached 0.20. When the eighth-grade students were combined with the seventh-grade students, the effect sizes were reduced and the effects were not significant, despite the increased sample size.

Analysis of Simulated Outcomes of MCLA in Year 4

This procedure examined actual outcomes from Years 2 and 4 and simulated outcomes from the same years. The simulated outcomes are estimates of scores that Year 2 students would have achieved if they *had* experienced MCLA and scores that Year 4 students would have achieved if they had *not* experienced MCLA. The differences between these simulated outcomes and the actual scores from Year 2 and Year 4 are calculated. Finally, to reduce the amount of bias from possible idiosyncratic variations between the years, the differences are averaged to produce a robust simulation of the overall effect of MCLA.

The covariates used are the same as those listed in the "Variables Included in Both Analyses" subsection above. In this subsection, the following symbols are used to indicate the actual and simulated outcomes (NCEs of ITBS scores):

Y_i = Actual outcome for Year 4 students

$\hat{Y}_i$ = Simulated counterfactual outcome for Year 4 students (if Year 4 students had *not* experienced MCLA)

S_i = Actual outcome for Year 2 students

$\hat{S}_i$ = Simulated counterfactual outcome for Year 2 students (if Year 2 students *had* experienced MCLA)

To create the least-biased estimate of the overall treatment effect of MCLA, the evaluators followed a simulation procedure that combined the cross-validation technique (Picard & Cook, 1984; Geisser, 1993) and a post-matching analytical approach to estimate the average treatment effect introduced by Ho, Imai, King and Stuart (2007; 2011, pp. 18-19). Ho, et al's (2007; 2011)

causal inference approach was carried out using the R package Zelig (Imai, King, & Lau, 2008). The evaluators carried out the simulation analyses in SAS.[21]

Analytic Procedure

Step 1: Evaluators fit a multiple linear regression model to the Cohort 2 schools' Year 2 student data. Next, the evaluators multiplied each of the coefficients estimated from the regression model by the observed Year 4 values of the corresponding covariates. The sum of the products of regression coefficients and the observed covariate values gave the estimated counterfactual outcome for the Year 4 students ($\hat{Y}_i$). The following is an example of the regression equation that was used to estimate the counterfactual outcome, with $\hat{Y}$ representing the estimate of a student's ITBS Total Reading score:

$$\hat{Y}_i = \beta_0 + \beta_1 \text{ (pretest ITBS Tot)} + \beta_2 \text{ (Female)} + \beta_3 \text{ (Free or Reduced Lunch)} + \beta_4 \text{ (ELL)} + \beta_5 \text{ (AfriAmerican)} + \beta_6 \text{ (School A)} + \beta_7 \text{ (School B)} + \beta_8 \text{ (School C)}$$

Step 2: Using the Cohort 2 schools' Year 4 data, evaluators constructed a multiple linear regression model with the same set of independent variables as those in the model built in Step 1. Next, the resulting regression coefficients were multiplied by covariate values from the Year 2 students. This provided an estimate of the counterfactual outcomes for the Year 2 students ($\hat{S}$). Since the Year 2 students did not receive MCLA, the estimated outcomes are predictions of the ITBS test scores that students would have achieved if they had received MCLA.

Step 3. Evaluators calculated the treatment effect of MCLA for the Year 4 sample by subtracting the simulated outcome from the actual outcome, and calculated the Year 2 treatment effect by subtracting the actual outcome from the simulated outcome. The resulting differences are two simulated estimates of the treatment effect of MCLA:

$Y_i - \hat{Y}_i$ = estimate of simulated treatment effect of MCLA in Year 4

$\hat{S}_i - S_i$ = estimate of simulated treatment effect of MCLA in Year 2

Step 4. To estimate the overall effect of MCLA, evaluators computed the weighted average of treatment effects for the Year 4 and Year 2 samples with respective sample size as the weight. Using the sample-weighted average of treatment effects reduced the bias of estimates due to idiosyncratic nature of data in either sample.

Figure VI-1 is an illustration of Step 1 of this estimation of the least biased average treatment effect. Evaluators plotted the observed scores of Year 4 students on the y-axis and the simulated counterfactual scores of Year 4 students on the x-axis, as shown in Figure VI-1. The evaluators

[21] The difference between the approach used in the present study and Ho et al.'s (2007; 2011) approach and regular cross-validation technique are: (1) the evaluators didn't apply the simulation based on matched data and hence had uneven treatment and comparison sample sizes. (2) the evaluators calculated the sample-weighted average of treatment effects for the treated (Year 4 cohort) and the comparison (Year 2 cohort), so the larger sample would contribute more weight to the estimates of the overall MCLA effect. (3) The regular cross-validation usually starts with splitting the sample into halves randomly while the two subsamples, i.e., the Year 2 and Year 4 cohorts, were defined in advance in the present approach. (4) The regular cross-validation approach uses stepwise selection in building the multiple regression model for one subsample, but the evaluators forced all the covariates in the model so that the variable selection would be consistent with that based on OLS regression.

calculated the difference between observed and simulated values for each of the students in the Year 4 sample, or $Y_i - \hat{Y}_i$, denoted by **e** in the figure. Each "e" in the figure is a random example of the difference between observed and simulated values, and the brackets indicate the vertical distance between the data point (the "e) and the diagonal, or the effect estimate for that student. Although this is not shown in the figure, evaluators also calculated the difference between simulated and observed values for students in the Year 2 sample. The average of these differences is the simulated estimate of the average treatment effect of MCLA.

Figure VI-1: Example of Scatterplot of Observed Outcome Scores vs. Simulated Counterfactual Scores.

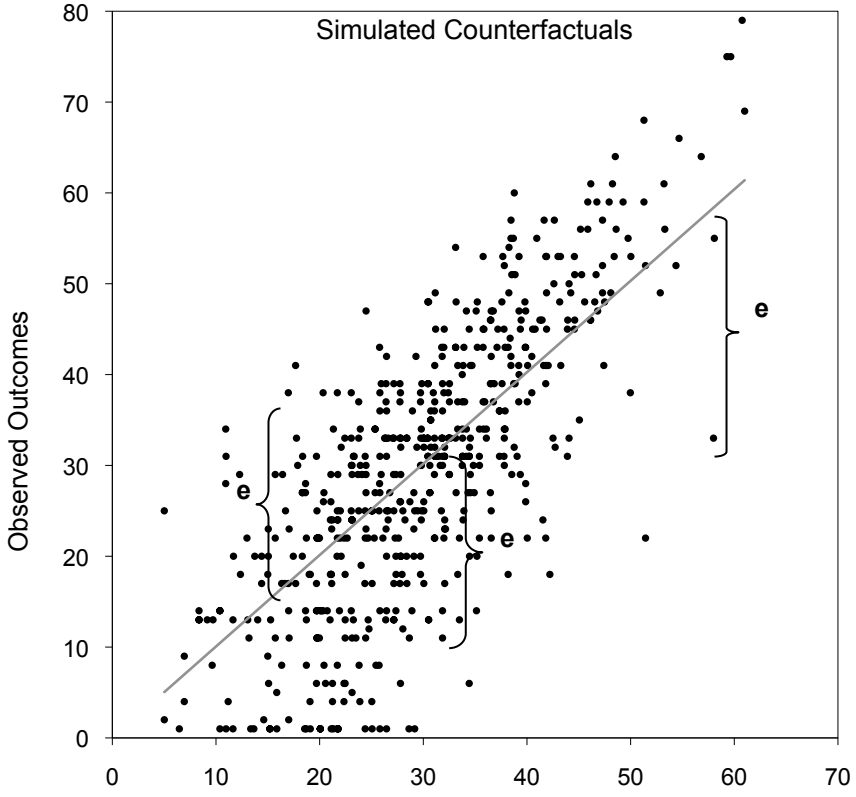


Table VI-7 summarizes the findings of treatment effects for the Year 4 and Year 2 students as well as the overall treatment effects for sixth-grade students, seventh-grade students, eighth-grade students, and seventh- and eighth-grade students combined. Multiple regression analyses were conducted separately for Year 4 and Year 2 samples. For the Year 4 sample, the first column, "Obs'd (T)", represents the observed outcome for the students. Because Year 4 sample received MCLA, the observed outcome is considered the treatment outcome, denoted by the "T" in parentheses. The next column, labeled "Est'd (C)," represents the predicted counterfactuals estimated using the regression estimates derived from Year 2 data. The "Diff" indicates the difference between the observed and predicted outcomes. Column "SD (C)" represents the standard deviation of the predicted ITBS post-test scores.

A paired-samples t-test was conducted to test the difference between each pair of observed and model-simulated outcomes. The associated *p* value is marked in bold if the difference is statistically significant at the .05 level. By dividing the difference by the standard deviation of the estimated posttest scores, the evaluators also obtained the standardized effect size (ES). A similar procedure was also applied to Year 2 data. Because Year 2 students did not receive MCLA, the observed ITBS posttest scores are considered the comparison outcome, as shown in column "Obs'd (C)." The column labeled "Est'd (T)" represents the predicted counterfactuals simulated using Year 4 data.

As shown by Table VI-11, there are eight statistically significant findings, of which the eighth-grade students' ITBS Vocabulary in Year 4 yielded the highest treatment effect size at .33, while the seventh- and eighth-grade students combined in Year 2 had the lowest effect at .06. It is noteworthy that the analyses revealed statistically significant simulated impacts on both the treated and comparison students for the ITBS Total Reading and Vocabulary scores of the students in eighth grade as well as the ITBS Vocabulary scores of the students in seventh and eighth grades combined. Therefore, the weighted average treatment effects for these three sets of outcomes are more robust than the others.

In particular, two years of MCLA seems to have had an overall treatment effect of .24 standard deviations on the eighth-grade students' ITBS Vocabulary scores, an overall treatment effect of .17 standard deviations on the eighth-grade students' ITBS Total Reading scores, and an overall treatment effect of .09 standard deviations on the seventh- and eighth-grade students' ITBS Vocabulary scores.

Conclusion

In conclusion, there is a high level of agreement between the results produced by the OLS regression method and the approach of using simulated outcomes. The significance level and magnitude of effects on eighth-grade students' ITBS Vocabulary and Total Reading scores are very close to the estimates derived from the OLS regression analyses: the effects on both vocabulary and total reading scores are about .20. The two approaches also agree on the magnitude of effect of MCLA on seventh- and eighth-grade students' vocabulary scores with ES = .08 for OLS and ES = .09 for the simulated-outcomes approach, although the estimated effect using OLS is marginally significant ($p = .056$). The two approaches presented above (as well as the difference-in-difference methods presented in Appendix T) produced highly similar results despite the differences in modeling and estimating the MCLA impact. This fact provides the researchers with strong evidence that the detectable significant impacts of MCLA treatment on the students included in these analytic samples is likely to be accurate. These results seem to indicate that MCLA is a professional development program worthy of additional study.

Table VI-11: Results of Simulated Outcome Analysis of MCLA Impact in Year 4

Outcome Variable		Year 4							Year 2							Avg. Tx effect	Total N
		Obs'd (T)	Est'd (C)	N	Diff	SD (C)	ES	*p**	Obs'd (T)	Est'd (C)	N	Diff	SD (C)	ES	*p*		
Grade 6	ITBS Total Reading	27.77	27.41	543	0.36	11.41	0.03	.407	29.83	29.63	556	0.20	15.17	0.01	.636	0.02	1099
	ITBS Comprehension	29.98	30.27	543	-0.29	10.94	-0.03	.561	31.77	32.34	556	-0.58	15.64	-0.04	.228	-0.03	1099
	ITBS Vocabulary	28.03	27.72	543	0.32	9.71	0.03	.487	29.54	29.19	556	0.34	14.77	0.02	.475	0.03	1099
Grade 7	ITBS Total Reading	31.62	31.50	384	0.12	11.15	0.01	.825	32.81	32.07	464	0.75	14.97	0.05	.167	0.03	848
	ITBS Comprehension	33.77	33.71	384	0.05	10.68	0.00	.928	35.97	34.38	464	1.59	14.86	0.11	**.005**	0.06	848
	ITBS Vocabulary	31.64	31.12	384	0.52	9.90	0.05	.453	31.79	31.31	464	0.48	16.39	0.03	.463	0.04	848
Grade 8	ITBS Total Reading	33.01	30.62	338	2.39	10.89	0.22	**<.001**	33.37	31.23	508	2.13	16.10	0.13	**<.001**	0.17	846
	ITBS Comprehension	34.23	33.35	338	0.87	9.81	0.09	.203	33.67	33.06	508	0.62	15.90	0.04	.287	0.06	846
	ITBS Vocabulary	33.63	30.61	338	3.03	9.23	0.33	**<.001**	34.53	31.67	508	2.86	15.95	0.18	**<.001**	0.24	846
Grades 7&8	ITBS Total Reading	32.27	31.40	722	0.87	10.67	0.08	**.036**	32.37	31.63	972	0.74	15.57	0.05	.053	0.06	1694
	ITBS Comprehension	33.98	33.67	722	0.31	9.86	0.03	.488	34.13	33.69	972	0.44	15.42	0.03	.267	0.03	1694
	ITBS Vocabulary	32.57	31.32	722	1.25	8.99	0.14	**.008**	32.47	31.50	972	0.97	16.16	0.06	**.029**	0.09	1694

Data sources: Years 2 and 4 demographic, pretest and posttest NCE scores of ITBS for students in Cohort 2 schools

** The* p *values were derived from the paired-samples t-tests of the difference between observed and estimated outcomes.*

Study Conclusions

Four years of analyses of data related to *READ 180* indicate that implementation varied widely across the eight Striving Readers schools' classrooms but has improved each year. Percentages of classrooms that were rated as adequate with regard to overall implementation were lowest in Year 1 (slightly above 40%) and in Year 4 reached levels of more than 80 percent. Despite these ratings indicating adequate implementation, impact estimates resulting from this four-year randomized control trial fail to provide evidence to suggest that *READ* 180 produces improved student performance beyond that of "business-as-usual" instruction provided by MCS to address the needs of adolescent struggling readers. Furthermore, the lack of significant findings has been consistent when analyzed across time or when ITT samples have been combined to increase power and regardless of whether HLM or propensity score matching techniques are used.

Regarding the schoolwide intervention, Year 4 results indicate low to medium levels of MCLA implementation at each of the four Striving Readers schools. As one part of RBS' implementation study, a cluster analysis of teachers' ratings related to classroom implementation of strategies based upon the MCLA Innovation Configuration (IC) Map and assigned by coaches was conducted. Profiles describing distinct practices of teachers in each group resulted in over half (53%) of the 83 teachers characterized as low-fidelity implementers, 26.5 percent as medium-fidelity implementers, and 20.5 percent as high-fidelity implementers. Findings suggest that the IC Map is a sufficiently sensitive framework to support empirical fidelity studies.

Year 4 represents completion of the second and final round of implementing MCLA, and ordinary least squares regression (OLS) and a quasi-experimental simulation analysis were carried out in an attempt to estimate improved achievement among students in the Cohort 2 schools that might be attributable to the whole-school intervention. The estimated impact of MCLA using either approach indicated similar findings. Specifically, significant improvements were detected for eighth-grade students' ITBS Vocabulary and Total Reading Scores, with effect sizes using either method estimated at around 0.20. Similar estimates were produced when calculating the magnitude of program effects on a combined sample of seventh and eighth grade students, although the OLS findings were not statistically significant. Taken together, particularly given the current climate with a federally driven focus on teacher training and teacher quality, these findings suggest that the revised MCLA model implemented in the Cohort 2 schools during Years 3 and 4 may be a promising professional development approach worthy of additional study.

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Appendix ES: Year 5 Plans for Dissemination

The following is a list of Year 5 efforts to disseminate findings from the Memphis Striving Readers Project. Only Year 5 events, defined as those occurring between March 1, 2010, and December 31, 2011, are included.

Presentations and Papers (completed)

Coffey, D. (2010, March). Mid-South Striving Readers Project Targeted Intervention: Secondary Analyses. Panel presentation at the Society for Research of Educational Effectiveness Conference, Washington, DC.

Feighan, K., & Harris, R. (2010, April). Evaluating a Multi-Year, Federally Funded Educational Initiative: Lessons from a Successful School District–Evaluator Partnership. Presentation at the Annual Eastern Evaluation and Research Society Conference, Absecon, NJ.

Feighan, K., & Heeren, E. (2010, April). The Data are in: Four Years of Coaching Implementation & Analysis. Presentation at the Second Annual International Literacy Coaching Suumit. Corpus Christi, TX.

Feighan, K., Heeren, E., & Feldman, J. (2010, May). Exploring the Relationship between Teachers' Literacy Strategy Use and Adolescent Achievement. Paper presented at the American Educational Research Association Annual Meeting, Denver, CO.

Feighan, K., and Heeren, E., (2010). "She was My Backbone: Measuring Coaching Work and Its Impact," in Literacy Coaching: Research & Practice edited by Cassidy, Garrett, and Sailors. Center for Educational Development, Evaluation, and Research (CEDER); Texas A & M University, Corpus Christi, College of Education.

Heeren, E., Heaston, R., Pollan, C., Hall, C., and Feighan, K. (2010, April). Literacy Coaching: Measuring the Impact in Urban Schools. Presented at the International Reading Association Annual Meeting in Chicago.

Heeren, E., and Feighan, K. (2010, June). Literacy Strategies in MCS Teachers' Toolkit: Lessons from the Field. Presented at the Forum for Innovative Leadership 2010 Annual Meeting in Memphis, TN.

Feldman, J.M. (2010, November). Empirically Establishing Implementation Fidelity of an Intervention for Struggling Reader. Presentation at the American Evaluation Association Annual Conference, San Antonio, TX.

Feldman, J.M. (2010, November). Striving Readers: Results from the Mid-South. Panel presentation at the American Evaluation Association Annual Conference, San Antonio, TX.

Rui, N., Bai, H., & Coffey, D. (2010, November). A Comparison of Genetic Matching and Propensity Score Matching Methods for Covariate Adjustment in a Reading Intervention Program Evaluation. Paper presentation at the American Evaluation Association Annual Conference, San Antonio, TX.

Feldman, J.M., Coffey, D., Rui, N. & Schenck, A. (2011, March). Striving for Balance: Using Rigorous Methods to Challenge Insignificant Findings, Presentation at the Society for Research of Educational Effectiveness Annual Conference, Washington, DC. Feighan, K., Heeren, E., and Feldman, J. (2011). The Correlates of Middle School Teachers' Professional Development Implementation, Instructional Beliefs, and Student Reading Achievement, paper commissioned by the US Dept of Education, retrievable from http://slcp.ed.gov/other-resources/slcp-sponsored-publications/issue-papers/.

Heeren, E., Pollock, C., Chitman, L., Feighan, K., and Feldman, J., (2011, April). Collaborating with Literacy Coaches to Measure Implementation Fidelity, Symposium presented at the Third International Literacy Coaching Summit, Philadelphia, PA. Rui, N., Feldman, J.M., Bai, H., Schenck, A. (2011, April). An Empirical Comparison of Genetic Matching and Propensity Score Matching for Covariate Adjustment, Roundtable presentation at the American Education Research Association Annual Conference, New Orleans, LA.

Feldman, J.M., Feighan, K.A., and Heeren, E. (2011, April). Aiming High: Implementation Fidelity, Cognitive Demand, and Struggling Readers' Literacy Outcomes, Roundtable paper presentation at the American Education Research Association Annual Conference, New Orleans, LA.

Feldman, J.M., Coffey, D., Rui, N. & Schenck, A. (2011, April). Striving for Meaning: Using Rigorous Methods to Challenge Insignificant Findings. Presentation at the American Education Research Association Annual Conference, New Orleans, LA.

Heeren, E., and Feldman, J. (2011, May). Today's Readers, Tomorrow's Leaders: Literacy Strategies that Impact Student Performance, Presentation at the International Reading Association 56th Annual Convention, Orlando, FL.

Cooter, R., Cardenes-Lopez, E. Cooter, K., Magpuri-Lavell, T., and Ogle, D. (2011, May). Breakthroughs in Academic Vocabulary Instruction with Urban Adolescent Learners: Results from Striving Readers Research, Presentation at the International Reading Association 56th Annual Convention, Orlando, FL.

Pollan, C., Heeren E., Feighan, K. (2011, June). Literacy Coaches in the Demonstration Classroom: A Sustainability Model, Presentation at the Forum for Innovative Leadership, Memphis, TN.

Presentations (accepted)

Heeren, E., Feldman, J., & Feighan, K. (2011, November). Today's Readers, Tomorrow's Leaders, Classroom demonstration accepted for presentation at the National Council of Teachers of English Conference, Chicago, IL.

Heeren, E., Feldman, J., & Feighan, K. (2011, November). Today's Readers, Tomorrow's Leaders: Literacy Strategies for Urban Middle Schools. Accepted for presentation at the National Middle School Association Conference, Louisville, KY.

Presentations (submitted)

Rui, N., Feldman, J. & Schenck, A. (2011, November). A Simulation- Based Causal Inference Approach Using Cross-Sectional Data. Paper submitted for presentation at the 32nd Annual Association for Public Policy Analysis and Management Conference, Boston, MA.

Feldman, J., Coffey, D., Rui, N. & Schenck, A. (2011, November). Striving for Balance: The Value of Publishing Rigorous Studies with Insignificant Findings. Proposed for presentation at the American Evaluation Association Annual Conference, Anaheim, CA.

Journal Publications (planned)

A refined version of the AERA Aiming High paper exploring relationships between cognitive demand, fidelity of implementation and student outcomes following completion of a two-year intensive literacy intervention for middle school content area teachers.

A methodological comparison of results using OLS, Simulation, and Differences of Difference Approaches to estimate two-year impact of an intensive literacy intervention for middle school content area teachers on striving adolescent readers' achievement in reading.

Findings from four Years of ITT analyses of *READ 180* and an exploratory analysis of differential effects on struggling adolescent readers of various reading levels.

Measuring Fidelity of Implementation: Opportunities, Tradeoffs, and Land Mines.

Other Publications in progress

"Improving Adolescent Literacy: Strategies and Professional Development Based on Work with Striving Readers." Led by Elizabeth Heeren, a team of authors representing Memphis City Schools and the University of Memphis is preparing a monograph based on the Striving Readers project experience. The content will include fluency strategies, vocabulary strategies, comprehension strategies, sample lesson plans, and how to build school capacity to support reading achievement. Presently in the draft stage, the development schedule calls for completion and conversion of the manuscript into a commercial-quality book to be published in December 2011. Keith Kershner (RBS) is leading the editing and production process. RBS Publications will disseminate the resulting book until at least 2016.

Innovation Configuration Map for the Memphis Content Literacy Academy (MCLA) Program
Memphis City Schools / University of Memphis
Memphis, Tennessee

Memphis Content Literacy Academy (MCLA) Innovation Configuration MAP

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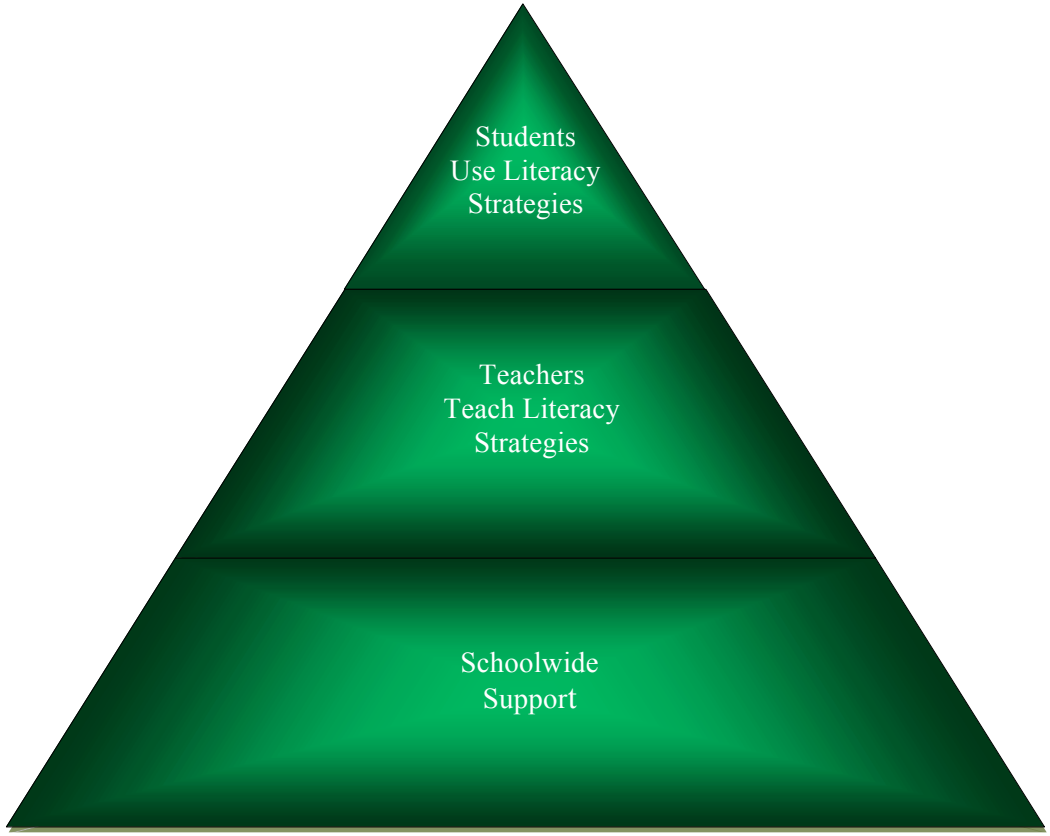
ORGANIZING FRAMEWORK OF THE MCLA IC MAP



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A. Students' Use of Literacy Strategies When Reading Content-Relevant Texts in Core Content Classes or for Homework

A.1. Checklist of MCLA literacy strategies that students should have learned to use *(by skill domains of reading and strategy lead)*

Code	Reading Skill Domain	Name of Strategy	Teacher or Student
S.1	C	Retelling (verbally, graphic organizers, written)	S
S.2	C	Student-generated questions	S
S.3	C	Student-led Question Answer Relationships	S
S.4	C & V	Graphic Organizers	S
S.5	C & V	Semantic Maps	S
S.6	C & V	Student-led Thinking Maps (flow chart, double bubble, etc.)	S
S.7	F	Choral reading (group/whole class)	S
S.8	F	Paired reading (partners)	S
S.9	V	Frayer Model	S
S.10	V	Semantic Feature Analysis	S
S.11	V	Student-led Word Sorts (open- and closed sorts)	S
T.01	ALL	Before, During, After	T
T.02	ALL	Choice (teachers and learners)	T
T.03	ALL	Combining Strategies- "Layering over time"	T
T.04	ALL	Cooperative Learning	T
T.05	ALL	Explicit, Direct Instruction (Gradual Release of Responsibility)	T
T.06	ALL	Instructional Conversations (CREDE)	T
T.07	ALL	Joint Productive Activity (CREDE)	T
T.08	ALL	Motivating Learners	T
T.09	ALL	Small Group Instruction	T
T.10	ALL	Use of leveled, supplemental materials (e.g., National Geographic)	T

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Code	Reading Skill Domain	Name of Strategy	Teacher or Student
T.11	C	Bloom's Taxonomy/Stem Questions	T
T.12	C	Expository Text Structures	T
T.13	C	METS	T
T.14	C	ReQuest	T
T.15	C	Teacher-led Question Answer Relationships (QARs)	T
T.16	C	Think-Pair-Share	T
T.17	C	Writing Organizer/Framework (K. Cooter)	T
T.18	C & V	Thinking Maps (flow chart, double bubble, etc.)	T
T.19	F	Choral Reading (Antiphonal, Unison, Echo)	T
T.20	F	Radio Reading	T
T.21	F	Repeated Readings	T
T.22	F	Scooping	T
T.23	V	Explicit Vocabulary Instruction	T
T.24	V	Pre-Instruction of Vocabulary	T
T.25	V	Pronunciation Review	T
T.26	V	Word maps	T
T.27	V	Teacher-led Word Sorts (open- and closed sorts)	T
T.28	V	Word Walls (Academic)	T

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A.2. Students' Use of Literacy Strategies (in collaborative/cooperative activity with peers, independent use)

a	b	c	d	e	f
A.2.a. Degree of students' independent use of MCLA strategies: Students exhibit, when appropriate, independent and integrated use of multiple strategies.	Students can self-select a strategy and use it independently.	Students demonstrate independent use of the strategy (without teacher or peer assistance) when the teacher tells them to use a strategy.	Students can use strategies with peers (cooperative or collaborative use) when teacher tells them to use a strategy.	Students are aware of the strategy, can somewhat use it but not without some teacher assistance or scaffolding.	Students engage in text-based work without the use of strategies.

a	b	c	d	e
A.2.b. Student roles and behaviors during cooperative learning activities: Students have assigned roles, carry out those roles, and exhibit behaviors consistent with class norms for cooperative learning activities (e.g., observing equity of voice, listening for understanding, offering positive feedback, appreciating contributions of others, etc.).	Students have assigned roles but do not carry out roles. Students do exhibit behaviors consistent with class norms for cooperative learning activities (e.g., observing equity of voice, listening for understanding, offering positive feedback, appreciating contributions of others, etc.).	Students are grouped for tasks but do not have assigned roles. Students exhibit some behaviors consistent with class norms for cooperative learning.	Students do not have assigned roles and do not exhibit behaviors consistent with class norms for cooperative learning activities.	There is no evidence that students are grouped in cooperative learning activities. Students work alone.

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B. Core Content Teachers Plan and Implement Lessons Integrating Literacy Strategies with Instruction on Core Content

B.1. Using information from assessments for revising instructional plans and developing plans for interventions				
a	**b**	**c**	**d**	**e**
B.1.a. Use of assessments for content learning: Teacher uses before, during, and after (end-of-unit) instructional assessments designed to provide information on the extent to which specific content-related learning objectives are being achieved.	Teacher uses before and after (end-of-unit) instructional assessments designed to provide information on the extent to which specific content-related learning objectives are being achieved.	Teacher uses summative (end-of-unit) instructional assessments to provide information on the extent to which specific content-related learning objectives are being achieved.	Teacher uses summative (end-of-unit) instructional assessments to assign grades.	
B.1.b. Use of assessments for learning content literacy strategies: Teacher uses before, during, and after (end-of-unit) instructional assessments designed to provide information on the extent to which content literacy strategies are being learned and used appropriately.	Teacher uses before and after (end-of-unit) instructional assessments designed to provide information on the extent to which specific content literacy strategies are being learned and used appropriately.	Teacher uses summative (end-of-unit) instructional assessments to provide information on the extent to which specific content literacy strategies are being learned and used appropriately.	Teacher uses instructional assessments but not to provide information on the extent to which specific content literacy strategies are being learned and used appropriately.	
B.1.c. Revision of instructional plans: Teacher uses information from instructional assessments of student progress with respect to specific content objectives to help him or her make revisions to instructional plans. In addition, teacher uses information from instructional assessments of students' independent use of content literacy strategies to help him or her make revisions to instructional plans.	Teacher uses information from instructional assessments of student progress with respect to specific content objectives to help him or her make revisions to instructional plans. In addition, teacher uses observations of students' appropriate use of content literacy strategies to help him or her make revisions to instructional plans.	Teacher uses information from formative assessments with respect to specific objectives to help him or her make revisions to instructional plans. In addition, teacher comparisons of students' reading level with the content text(s) are used to help him or her make revisions to instructional plans.	Teacher uses information from a single content pre-assessment of specific objectives to help him or her make revisions to instructional plans. The teacher does revise instructional plans based on students' use of content literacy strategies.	Teacher uses his/her knowledge of content objectives to plan instruction and does not revise instructional plans.

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B.1. Using information from assessments for revising instructional plans and developing plans for interventions				
a	**b**	**c**	**d**	**e**
B.1.d. Design interventions for struggling students: Teacher uses information from instructional assessments to plan supplementary instruction for most struggling students.	Teacher uses information from instructional assessments to plan supplementary instruction for some struggling students.	Teacher uses information from instructional assessments to plan supplementary instruction for a few struggling students.	Teacher uses information from a single instructional pre-assessment to plan supplementary instruction for a few struggling students.	Teacher designs any supplementary instruction provided to the whole class and does not use information from instructional assessments or design interventions to meet the needs of individual struggling students.

B.2. Providing explicit, direct instruction, and practice *(daily instruction, teacher modeling, guided practice)*				
a	**b**	**c**	**d**	**e**
B.2.a. Introduction of strategies: Teacher (1) names the strategy and (2) describes the purpose of the strategy and when it is to be used. Teacher activates students' background knowledge and experiences to help them understand the strategy.	Teacher mentions the strategy but does not provide students with a full description of the purpose of the strategy and when it is to be used.	Teacher provides content instruction only.		
B.2.b. Teacher modeling: In providing explicit and direct instruction, teacher *consistently* models initial use of the strategies (e.g., think-alouds, questioning).	In providing explicit and direct instruction, teacher *occasionally* models initial use of the strategies.	Teacher makes *passing reference* to the strategy with no modeling provided.	Teacher provides content instruction only.	
B.2.c. Guided practice: In providing explicit and direct instruction, teacher consistently provides multiple guided practice activities using a variety of texts. Students receive relevant feedback with respect to their use of specific strategies.	In providing explicit and direct instruction, teacher occasionally involves students in guided practice activities and provides general feedback.	In providing instruction, teacher involves students in follow-up activities without feedback.	Teacher provides instruction without guided practice.	

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B.2. Providing explicit, direct instruction, and practice *(daily instruction, teacher modeling, guided practice)*				
a	**b**	**c**	**d**	**e**
B.2.d. Independent use: Teacher provides opportunities for students' independent practice and monitors students' progress applying strategies to assess additional learner needs.	Teacher provides opportunities for students' independent practice but does not monitor students' progress.	Teacher uses continual teacher-directed whole-class instruction to guide students' strategy application.		
B.2.e. Differentiated instruction: Teacher differentiates instruction based on analysis of progress monitoring (e.g., small groups, use of technology, reteaching, use of curriculum resource center materials)	Teacher differentiates instruction but does not use data to flexibly group students.	Teacher relies primarily on whole-group instruction.		
B.2.f. Revisiting of strategies: Teacher *consistently* revisits previously introduced literacy strategies as opportunities to apply them to new material.	Teacher *occasionally* revisits previously introduced literacy strategies as opportunities to apply them to new material.	Teacher makes *passing reference* to previously taught strategies without providing opportunities for students to apply those strategies to new material.	Teacher introduces each strategy once but does not revisit when new material is presented.	

B.3. Objectives of instructional plans *(core content knowledge and skills, literacy strategies)*				
a	**b**	**c**	**d**	**e**
B.3.a. Objectives in terms of core content standards' learning objectives, knowledge, and skills: Teacher's instructional plans are linked to content learning objectives and related to prior learning and students' real life applications.	Teacher's instructional plans are linked to content standards and related to prior learning.	Teacher's instructional plans describe what core content knowledge and skills will be worked on during the lessons. Plan has vague reference to content standards.	Teacher's instructional plans are general and/or non-specific.	Teacher's instructional plans are not available.

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B.3. Objectives of instructional plans *(core content knowledge and skills, literacy strategies)*				
a	**b**	**c**	**d**	**e**
B.3.b. Objectives in terms of literacy strategies: Teacher's instructional plans include literacy strategies appropriate to the learning task and sequencing of the lessons. Lesson plans include activities that guide students toward independent application of literacy strategies.	Teacher's instructional plans match appropriate literacy strategies matched to learner needs to assist learners in acquiring core content knowledge.	Teacher's instructional plans match appropriate literacy strategies to assist learners in acquiring core content knowledge but without a match to learner needs.	Teacher's instructional plans reference the use of literacy strategies randomly (not embedded in use of text, appropriate to the sequence of the lesson—use of strategy for "use of strategy" instead of matching learning needs and sequencing to appropriate use of strategy).	Teacher's instructional plans make no reference to literacy strategies and only target core content.

B.4. Using different instructional materials				
a	**b**	**c**	**d**	**e**
B.4.a. Use of adopted textbook: At least 3 days per week (and in all class periods, teacher helps students read and learn content from the adopted textbook.	1-2 days per week in at least 75% of class periods, teacher helps students read and learn content from the adopted textbook.	1-2 days per week in at least 50% of class periods, teacher help students read and learn content from the adopted textbook.	Occasionally (at least monthly in at least 1 class period), teacher helps students read and learn content from the adopted textbook.	Teacher does not help students read and learn content from the adopted textbook. Teacher expects students to read and learn content from the adopted textbook without help.
B.4.b. Use of MCLA supplementary materials: At least 3 days per week (and in all class periods, teacher helps students select MCLA materials appropriate for their reading level, and read and learn content from those materials related to course objectives.	1-2 days per week in at least 75% of class periods, teacher helps students select MCLA materials appropriate for their reading level, and read and learn content from those materials related to course objectives.	1-2 days per week in at least 50% of class periods, teacher helps students select MCLA materials appropriate for their reading level, and read and learn content from those materials related to course objectives.	Occasionally (at least monthly in at least 1 class period), teacher helps students select MCLA materials appropriate for their reading level, and read and learn content from those materials related to course objectives.	Teachers do not help students select MCLA materials appropriate for their reading level, and read and learn content from those materials related to course objectives.

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B.4. Using different instructional materials				
a	**b**	**c**	**d**	**e**
B.4.c. Use of materials that the teacher has collected from other sources (e.g., on-line/libraries, etc.): At least 3 days per week (and in all class periods, teacher collects materials from other sources and help students to read and learn content from those sources related to course objectives.	1-2 days per week in at least 75% of class periods, teacher collects materials from other sources and help students to read and learn content from those sources related to course objectives.	1-2 days per week in at least 50% of class periods, teacher collects materials from other sources and helps students to read and learn content from those sources related to course objectives.	Occasionally (at least monthly in at least 1 class period), teacher collects materials from other sources and help students to read and learn content from those sources related to course objectives.	Teachers do not collect materials from other sources and help students to read and learn content from those sources related to course objectives.

B.5. Using cooperative learning activities with students				
a	**b**	**c**	**d**	**e**
B.5.a. Frequency of cooperative learning activities in class periods: Teacher includes cooperative learning activities as part of lessons at least 3 days per week in all class periods.	Teacher includes cooperative learning activities as part of lessons 1-2 days per week in at least 75% of class periods.	Teacher includes cooperative learning activities as part of lessons 1-2 days per week in at least 50% of teacher's class periods.	Teacher includes cooperative learning activities as part of lessons occasionally (at least monthly) in at least 1 class period.	Teacher uses whole group instruction with no evidence of cooperative learning activities.

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B.5. Using cooperative learning activities with students				
a	**b**	**c**	**d**	**e**
B.5.b. Purposes of cooperative learning activities: Teacher uses cooperative learning activities to provide students opportunities to practice extensively both their use of specific literacy strategies with various texts and their application of new content knowledge and skills (i.e., to "over-learn" those strategies, that knowledge, and those skills). Cooperative learning strategies also are used to differentiate instruction based on identified learning needs.	Teacher uses cooperative learning activities to provide students opportunities to practice the specific literacy strategies with various texts and separately to practice their application of new content knowledge and skills (i.e., to "over-learn" those strategies, that knowledge, and those skills).	Teacher uses cooperative learning activities to provide students opportunities to practice the specific literacy strategies only with their adopted textbook and to practice their application of new content knowledge and skills.	Teacher uses cooperative learning activities to provide students with practice of new content knowledge and skills.	There is no evidence that teacher uses cooperative learning activities or cooperative learning activities have no clear learning objectives.

B.6. Collaborative Teacher Work ((*schedule facilitates collaborative work, core content teachers regularly develop collaborative instructional plans)*				
a	**b**	**c**	**d**	**e**
B.6.a. Breadth of teacher participation in collaborative planning: All MCLA teachers in a department and/or grade level team have time each week to work collaboratively (with each other and literacy coaches?) on integrating literacy strategies into their content lesson plans.	At least 75% of MCLA teachers in a department and/or grade level team have time each week to work collaboratively on integrating literacy strategies into their content lesson plans.	50% - 74% of MCLA teachers in a department and/or grade level team have time each week to work collaboratively on integrating literacy strategies into their content lesson plans.	30% - 49% of MCLA teachers in a department and/or grade level team have time each week to work collaboratively on integrating literacy strategies into their content lesson plans.	Fewer than 30% of MCLA teachers in a department and/or grade level team have time each week to work collaboratively for on integrating literacy strategies into their content lesson plans.

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B.6. Collaborative Teacher Work ((*schedule facilitates collaborative work, core content teachers regularly develop collaborative instructional plans)*				
a	**b**	**c**	**d**	**e**
B.6.b. Frequency/duration of collaborative planning: MCLA teachers in a department and/or grade level team work collaboratively for useful periods of time (minimum 45 minutes weekly) on **integrating literacy strategies** into their content lesson plans.	MCLA teachers in a department and/or grade level team work collaboratively for useful periods of time (minimum 30 minutes at least twice monthly) on integrating literacy strategies into their content lesson plans.	MCLA teachers in a department and/or grade level team work collaboratively for useful periods of time (minimum 30 minutes at least once per month) on integrating literacy strategies into their content lesson plans.	MCLA teachers in a department and/or grade level team work collaboratively less than once per month for a minimum of 30 minutes on integrating literacy strategies into their content lesson plans.	MCLA teachers in a department and/or grade level team work collaboratively for less than 15 minutes and no more than twice monthly on integrating literacy strategies into their content lesson plans.

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C. SCHOOLWIDE FACTORS

C.1. Principal Leadership				
a	**b**	**c**	**d**	**e**
C.1.a. Attending MCLA events: Principal and assistant principals attend both types of MCLA-related events for teachers: kick-off and laureate conference.	Principal attends both types of MCLA-related events for teachers and a team member (e.g., assistant principal) attends one event.	Principal attends all MCLA-related events for teachers without any team members.	Principal sends a designee to attend one or both types of MCLA-related events for teachers.	No school administrator attends MCLA-related events for teachers.
C.1.b. Communicating within the school the importance of literacy instruction in content areas: At weekly faculty meetings and at least once weekly during daily announcements, principal communicates to the teachers and students his or her belief in the importance of literacy instruction for improving student achievement in the content areas.	At least twice monthly at faculty meetings and during daily announcements, principal communicates to the teachers and students his or her belief in the importance of literacy instruction for improving student achievement in the content areas.	At least once monthly at faculty meetings and during daily announcements, principal communicates to the teachers and students his or her belief in the importance of literacy instruction for improving student achievement in the content areas.	Every other month, principal communicates to the teachers his or her belief in the importance of literacy instruction for improving student achievement in the content areas.	Principal communicates to the teachers his or her belief in an alternative view of what kinds of instruction is important for improving student achievement in the content areas (i.e., works as a saboteur of MCLA)

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C.1. Principal Leadership				
a	**b**	**c**	**d**	**e**
C.1.c. Communicating to broader school community the importance of literacy instruction in content areas: Principal has and implements an integrated, multifaceted approach to continually communicate to parents and other stakeholders via multiple avenues (e.g., banners, posters, newsletters, speaking at events with parents/ community members present) his or her belief in the importance of literacy instruction for improving student achievement in the content areas.	Principal has a plan to communicate with parents and other stakeholders his or her belief in the importance of literacy instruction for improving student achievement in the content areas but only partially implements that plan.	Without a communication plan, principal sometimes communicates to parents and other stakeholders his or her belief in the importance of literacy instruction for improving student achievement in the content areas.	Principal communicates to parents and other stakeholders his or her belief in the importance of improving student achievement in the content areas without reference to literacy instruction.	Principal communicates to parents and other stakeholders his or her belief in an alternative view of what kinds of instruction is important for improving student achievement in the content areas (i.e., works as a saboteur of MCLA).
C.1.d. Participation in MCLA Fellowship: Principal and other administrators participate actively in all MCLA Fellowship meetings.	Principal attends all MCLA Fellowship meetings and brings a team member to most of the meetings.	Principal participates actively in all MCLA Fellowship meetings but does not bring a team member.	Principal attends almost all Fellowship meetings and ensures that team members attend missed meeting(s).	The principal participates sporadically in MCLA Fellowship meetings. The school is not represented at every meeting.
C.1.e. Incorporation of literacy and MCLA in improvement plan: Principal ensures that schoolwide literacy instruction in content area classes and the MCLA project are a priority in the school's improvement plan.	Principal ensures that schoolwide literacy instruction in content area classes and the MCLA project are included in the school's improvement plan.	Principal ensures that schoolwide literacy instruction in content area classes is included in the school's improvement plan without any mention of MCLA.	The school improvement plan emphasizes content-area instruction without a focus on literacy.	

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C.1. Principal Leadership				
a	**b**	**c**	**d**	**e**
C.1.f. Reallocation and procurement of additional resources: Principal reallocates existing resources and seeks additional resources to supplement and support schoolwide MCLA implementation.	Principal reallocates existing resources but does not seek additional funding for MCLA and schoolwide literacy efforts.	Principal expects existing resources to cover the costs of resources to support MCLA implementation.	Principal reallocates MCLA resources to other purposes not related to literacy instruction in the content areas.	
C.1.g. Supportive schedule: The school schedule enables *all* grade-level teachers in a department or grade level teams to work collaboratively for useful periods of time (minimum of 45 minutes weekly) during the regular school day**.**	The school schedule enables *at least 75%* of grade-level teachers in a department or grade level team to work collaboratively for useful periods of time on integrating literacy strategies into their content lesson plans during the regular school day**.**.	The school schedule enables *50% - 75%* of grade-level teachers in a department or grade level team to work collaboratively for useful periods of time on integrating literacy strategies into their content lesson plans during the regular school day**.**.	The school schedule enables *30% - 49%* of grade-level teachers in a department or grade level team to work collaboratively for useful periods of time on integrating literacy strategies into their content lesson plans during the regular school day**.**.	The school schedule *does not* enable grade-level teachers in a department or grade level team to work collaboratively for useful periods of time on integrating literacy strategies into their content lesson plans during the regular school day**.**.

C.2. Administrator Walkthroughs				
a	**b**	**c**	**d**	**e**
C.2.a. Frequency of walkthroughs: Administrator does *daily* walkthroughs of core content classes.	Administrator does at least *2x/weekly* walkthroughs of core content classes.	Administrator does *1x weekly* walkthroughs of core content classes.	Administrator does at least *monthly (but < weekly)* walkthroughs of core content classes.	Administrator *never* does walkthroughs of core content classes.
C.2.b. Purpose of walkthroughs: When the administrator performs informal walkthroughs, he or she looks for student use of literacy strategies.	When the administrator performs informal walkthroughs, he or she looks for teacher use of literacy strategies.	When the administrator performs informal walkthroughs, he or she looks for general, nonspecific, superficial use of literacy strategies.	When the administrator performs informal walkthroughs, he or she is focused on other aspects of teacher performance and not use of literacy strategies.	Administrator walkthroughs only happen for formal evaluations.

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C.2. Administrator Walkthroughs				
a	**b**	**c**	**d**	**e**
C.2.c. Feedback provided from walkthroughs: When the administrator observes student use of a literacy strategy during a walkthrough, the administrator *provides immediate feedback* to the teacher *on teacher and student use of the strategy*.	When the administrator performs walkthroughs, he or she provides feedback (*not immediate but fairly soon after*) to the teacher *on student and teacher use* of literacy strategies.	When the administrator performs walkthroughs, he or she provides feedback (*not immediate but fairly soon after*) to the teacher *on teacher use* of literacy strategies	When the administrator observes the use of a literacy strategy during a walkthrough, the administrator *acknowledges* that use to the teacher.	Even when the administrator observes the use of a literacy strategy during a walkthrough, the administrator *does not* acknowledge that use to the teacher.

C.3. Principal's Support of Coach (*inclusion in leadership team meetings, classroom implementation of MCLA strategies, influencing allocation of resources related to literacy; coaching role)*				
a	**b**	**c**	**d**	**e**
C.3.a. Principal includes coach in leadership meetings: Principal regularly includes coach in leadership team meetings.	Principal sometimes includes coach in leadership team meetings.	Principal infrequently includes coach in leadership team meetings.	Principal does not include coach in leadership team meetings.	Principal prevents coach from attending leadership team meetings.
C.3.b. Principal communicates expectations to teachers regarding working with coach: Principal actively and consistently communicates to teachers the expectation that they work with their coach to support classroom implementation of MCLA strategies.	Principal sometimes communicates to teachers the expectation that they work with their coach to support classroom implementation of MCLA strategies.	Principal does not explicitly communicate to teachers the expectation that they work with their coach to support classroom implementation of MCLA strategies but allows it.	Principal communicates expectations that teachers' efforts be directed towards alternatives to classroom implementation of MCLA strategies (related or unrelated to literacy).	

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C.3. Principal's Support of Coach (*inclusion in leadership team meetings, classroom implementation of MCLA strategies, influencing allocation of resources related to literacy; coaching role)*				
a	**b**	**c**	**d**	**e**
C.3.c. Principal views coach as resource for literacy related decisions: Principal views the coach as a resource and regularly seeks coach input on decisions related to literacy: curricula and instruction, material purchases, and assessments.	Principal views the coach as a resource and selectively seeks coach input on decisions related to literacy: curricula and instruction, material purchases, and assessments.	Principal does not view the coach as a resource and does not seek the coach's advice in making decisions related to literacy.		
C.3.d. Principal views coach as resource for school PD: Principal requests that the coach facilitate school-based staff PD in use of MCLA strategies.	Principal requests that the coach provide information to staff (but is not asked to provide PD) about MCLA strategies.	Principal requests that the coach provide information to him/her (but not school staff) about MCLA strategies.	Principal requests that the coach perform duties outside their defined role (e.g., substitute teaching, cafeteria duty, etc.).	Principal requires that the coach spend most of their time on duties outside their defined role (e.g., substitute teaching, cafeteria duty, etc.).

C.4. School Culture (*core content teachers' acceptance of collective responsibility for student literacy, core content area teachers describe literacy instruction within the content areas as a school priority, use by core content teachers of a widely accepted research-based vocabulary related to literacy instruction/literacy strategies)*				
a	**b**	**c**	**d**	**e**
C.4.a. Collective responsibility for student literacy. At least 90% of content area teachers can describe how they are working with grade-level content area colleagues to integrate literacy instruction into their content lesson plans.	75% - 89% of content area teachers can describe how they are working with grade-level content area colleagues to integrate literacy instruction into their content lesson plans.	50% - 74% of content area teachers can describe how they are working with grade-level content area colleagues to integrate literacy instruction into their content lesson plans.	25% - 49% of content area teachers can describe how they are working with grade-level content area colleagues to integrate literacy instruction into their content lesson plans.	Less than 25% of content area teachers can describe how they are working with grade-level content area colleagues to integrate literacy instruction into their content lesson plans.

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C.4. School Culture (*core content teachers' acceptance of collective responsibility for student literacy, core content area teachers describe literacy instruction within the content areas as a school priority, use by core content teachers of a widely accepted research-based vocabulary related to literacy instruction/literacy strategies)*				
a	**b**	**c**	**d**	**e**
C.4.b. Schoolwide use of literacy strategies. At least 90% of core content area teachers incorporate student use of literacy strategies as an integral part of content area instruction.	75% - 89% of core content area teachers incorporate student use of literacy strategies as an integral part of content area instruction.	50% - 74% of core content area teachers incorporate student use of literacy strategies as an integral part of content area instruction.	25% - 49%of core content area teachers incorporate student use of literacy strategies as an integral part of content area instruction.	Less than 25% of core content area teachers incorporate student use of literacy strategies as an integral part of content area instruction.

C.5. Critical mass of core content teachers *(significant proportion of core content teachers participating in MCLA, percentage of students that have MCLA trained teachers for all four of their core content areas)*				
a	**b**	**c**	**d**	**e**
C.5.a. Proportion of core content teachers in MCLA: At least 90% of the core content teachers in the school are participating in the MCLA project.	Between 67% and 89% of the core content teachers in the school are participating in the MCLA project.	50% to 66% of the core content teachers in the school are participating in the MCLA project.	Between 33 and 49% of the core content teachers in the school are participating in the MCLA project.	Less than 33% of the core content teachers in the school are participating in the MCLA project.
C.5.b. Percentage of students having MCLA-trained teachers: Between 80 and 100% of the students have MCLA trained teachers for all four of their core content areas.	Between 60 and 79% of the students have MCLA trained teachers for all four of their core content areas.	Between 40 and 59% of the students have MCLA trained teachers for all four of their core content areas.	Between 20 and 39% of the students have MCLA trained teachers for all four of their core content areas.	Between 0 and 19% of the students have MCLA trained teachers for all four of their core content areas.

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Summary Sheet for the MCLA Innovation Configuration Map

Site _____ *Grade* _____ *Instructor* _____

Observer _____ *Date* _____

A. Student Use Of Literacy Strategies when Reading Content-Relevant Texts in Core Content Classes or for Homework

A.2. Student Use of Literacy Strategies

A.2.a. Students' independent use of MCLA strategies

A	B	C	D	E	F	Not observed

A.2.b. Student roles and behaviors during cooperative learning activities

A	B	C	D	E	Not observed

B. Core Content Teachers Plan and Implement Lessons Integrating Literacy Strategies with Instruction on Core Content

B.1. Core Content Teachers Use Information from Assessments for Revising Instructional Plans and Developing Plans for Intervention

B.1.a. Use of assessments for content learning

A	B	C	D	Not observed

B.1.b. Use of assessments for learning content literacy strategies

A	B	C	D	Not observed

B.1.c. Revision of instructional plans

A	B	C	D	E	Not observed

B.1.d.Design interventions for struggling students

A	B	C	D	E	Not observed

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B.2. Core Content Teachers Provide Explicit, Direct Instruction and Practice				
B.2.a. Introduction of strategies				
A	B	C		Not observed
B.2.b. Teacher modeling				
A	B	C	D	Not observed
B.2.c. Guided practice				
A	B	C	D	Not observed
B.2.d. Independent use				
A	B	C		Not observed
B.2.e. Differentiated instruction				
A	B	C		Not observed
B.2.f. Revisiting of strategies				
A	B	C	D	Not observed
B.3. Objectives of Instructional Plans				
B.3.a. Objectives in terms of core content standards' learning objectives, knowledge, and skills				
A	B	C	D	E	Not observed
B.3.b. Objectives in terms of literacy strategies				
A	B	C	D	E	Not observed
B.4. Using Different Instructional Materials				
B.4.a. Use of adopted textbook				
A	B	C	D	E	Not observed
B.4.b. Use of MCLA supplementary materials				

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A	B	C	D	E	Not observed
B.4.c. Use of materials that the teacher has collected from other sources					
A	B	C	D	E	Not observed
B.5 Using Cooperative Learning Activities with Students					
B.5.a. Frequency of cooperative learning activities in class periods					
A	B	C	D	E	Not observed
B.5.b. Purposes of cooperative learning activities					
A	B	C	D	E	Not observed
B.6. Collaborative Teacher Work					
B.6.a. Breadth of teacher participation in collaborative planning					
A	B	C	D	E	Not observed
B.6.b. Frequency/duration of collaborative planning					
A	B	C	D	E	Not observed

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C. Principal Leadership					
C.1. Principal Leadership					
C.1.a. Attending MCLA events					
A	B	C	D	E	Not observed
C.1.b. Communicating within the school the importance of literacy instruction in content areas					
A	B	C	D	E	Not observed
C.1.c. Communicating to broader school community the importance of literacy instruction in content areas					
A	B	C	D	E	Not observed
C.1.d. Participation in MCLA Fellowship.					
A	B	C	D	E	Not observed
C.1.e. Incorporation of literacy and MCLA in improvement plan					
A	B	C	D	Not observed	
C.1.f. Reallocation and procurement of additional resources					
A	B	C	D	Not observed	
C.1.g. Supportive schedule					
A	B	C	D	E	Not observed
C.2. Administrator Walkthroughs					
C.2.a. Frequency of walkthroughs					
A	B	C	D	E	Not observed
C.2.b. Purpose of walkthroughs					
A	B	C	D	E	Not observed
C.2.c. Feedback provided from walkthroughs					

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A	B	C	D	E	Not observed
C.3. Principal's Support of Coach					
C.3.a. Principal includes coach in leadership meetings					
A	B	C	D	E	Not observed
C.3.b. Principal communicates expectations to teachers regarding working with coach					
A	B	C	D		Not observed
C.3.c. Principal views coach as resource for literacy-related decisions					
A	B	C			Not observed
C.3.d. Principal views coach as resource for school PD					
A	B	C	D	E	Not observed
C.4. School Culture					
C.4.a. Collective responsibility for student literacy					
A	B	C	D	E	Not observed
C.4.b. Schoolwide use of literacy strategies					
A	B	C	D	E	Not observed
C.5. Critical Mass of Core Content Teachers					
C.5.a. Critical mass of core content teachers					
A	B	C	D	E	Not observed
C.5.b. Critical mass of MCLA-trained teachers for students					
A	B	C	D	E	Not observed

READ 180 Classroom Observation Protocol

Observer: _____ Observation date: _____

School: _____ Teacher: _____ Grade: ☐ 6th ☐ 7th ☐ 8th

Official class start time: _____ **Official** class end time: _____

Observation start time: _____ **Observation** end time: _____

Number of students **15 minutes after** class start time: __ __ Number of boys: __ __

Number of **non**-black students: __ __ Number of girls: __ __

Whole-group instruction:

1.	Did the teacher provide whole-group instruction?	☐ yes ☐ no
2.	Did the teacher use identifiable *READ 180* materials or lessons?	☐ yes ☐ no
3.	What was the level of engagement?	☐ low ☐ mixed ☐ high
4.	Did the teacher use any of the following activities? (check all that apply, then in the space below, list any specific reading strategies that you recognize.)	☐ shared reading ☐ think-alouds ☐ modeling of reading strategies
5.	What were the start and end times of READ 180 whole-group instruction?	___:___ ___:___
6.	Briefly describe what occurred during whole-group instruction.	

Overall student rotations (answer these questions by observing <u>all</u> small groups):

7.	Did students separate into small groups?	☐ yes ☐ no
8.	How many students were in each group? *(If there were only two groups, please draw a line through "Group C.")*	Group A: __ __ Group B: __ __ Group C: __ __
10.	Did the teacher and students use *READ 180* materials or lessons?	computer use ☐ yes ☐ no independent reading ☐ yes ☐ no small-group instruction ☐ yes ☐ no
11.	What were the start and end times of each rotation?	Rotation 1: ____:____ ____:____ Rotation 2: ____:____ ____:____ Rotation 3: ____:____ ____:____

12. What were the levels of engagement? *(If a small group did not participate in one or more rotations, please draw a line through the corresponding "low – mixed – high" space/s.)*

	Group A			Group B			Group C		
computer use	☐ low	☐ mixed	☐ high	☐ low	☐ mixed	☐ high	☐ low	☐ mixed	☐ high
independent reading	☐ low	☐ mixed	☐ high	☐ low	☐ mixed	☐ high	☐ low	☐ mixed	☐ high
small-group instruction	☐ low	☐ mixed	☐ high	☐ low	☐ mixed	☐ high	☐ low	☐ mixed	☐ high

Small-group rotations (answer these questions according to the one group you followed in detail):

Small-group instruction rotation

13. Did the teacher provide small-group instruction? (whether or not students were engaged) ☐ yes ☐ no

13a. Did the teacher and/or lesson specifically address any of the following reading strategies?
- ☐ summarizing
- ☐ predicting
- ☐ responsive writing
- ☐ student-generated questions
- ☐ other _____

13b. Did the teacher and/or lesson specifically address any of the following reading domains?
- ☐ fluency
- ☐ vocabulary
- ☐ comprehension
- ☐ phonics

14. Were the students expected to use *rBooks*? ☐ yes ☐ no

15. Were the students expected to use other books or worksheets? ☐ yes ☐ no

15a. If yes, please describe what other materials the students used (provide as much information as possible, e.g., author, title, series, publisher—be sure to look for Scholastic logo or other indicators)

16. Briefly describe what occurred during the small-group instruction rotation.

Independent reading rotation

17. Were students expected to read and/or listen to Scholastic's *READ 180* books and/or audiobooks? ☐ yes ☐ no

17a. Are Scholastic novels and trade books easily accessible to students? ☐ yes ☐ no

17b. Are books organized according to reading (i.e., SRI or lexile) level? ☐ yes ☐ no

18. Did the students read other independent reading materials? ☐ yes ☐ no

19. If the students read other materials, please describe those, including title and author whenever possible.

20. Briefly describe what occurred during the independent reading rotation.

Computer workstations rotation

21. Did all students present have access to a **working** computer running *READ 180* software for the majority of their computer rotation?	☐ yes ☐ no
22. Did students seem to understand how to complete the *READ 180* lessons on the computer?	☐ yes ☐ no
23. Briefly describe what occurred during the computer workstations rotation.	

Whole-group wrap-up:

24. Did the teacher use identifiable *READ 180* materials or lessons? *(Look for the Scholastic logo or evidence of use of any from the Teacher Bookshelf, not just rBooks.)*	☐ yes ☐ no
25. What was the level of engagement?	☐ low ☐ mixed ☐ high
26. What were the start and end times of whole-group wrap-up?	___:___ ___:___
27. Which of the following features did the teacher lead or expect during wrap-up? (check all that apply)	☐ clean-up ☐ "exit ticket" related to classwork ☐ review of class or lesson ☐ connection of lesson with another content area or previous classes
28. Briefly describe what occurred during whole-group wrap-up.	

Questions to <u>ask the teacher</u> immediately after the observation:

29. How many students were absent today?			__ __
30. Do your students typically use *rBooks*?			☐ yes ☐ no
If the answer to #30 was "yes," ask 31: 31. What ***rBook*** Workshop number is this class working on?			__ __
31a. About how frequently do you use ***rSkills*** tests and quizzes?	☐ more than weekly ☐ weekly	☐ twice monthly ☐ monthly	☐ quarterly ☐ never
31b. About how frequently do you use **SAM, the Scholastic Achievement Manager**?	☐ more than weekly ☐ weekly	☐ twice monthly ☐ monthly	☐ quarterly ☐ never

Questions to ask the teacher immediately after the observation, contd.:

31c. Which **SAM** reports do you use?

31d. How do you use data from those **SAM** reports?

31e. Do you group students in any particular way? For what reasons and how often would/do you modify groupings?

If personal audio equipment (CD or cassette players, headphones, etc.) was available, but no students used it, ask the following:

32. Do the CD players and headphones for "books-on-CD" guided reading work properly? ☐ all ☐ some ☐ none

33. Is there anything in particular I should know about this class session or these students?

33a. What did today's lesson tell you about what your students are learning and still need to learn? What will students in this class being doing over the next few weeks?

33b. What challenges have you faced in encouraging your students to be actively engaged in *READ 180?* How have you approached these challenges?

33c. Is this class only *READ 180* or is it a combined *READ 180* and ELA class? ☐ *R180* only ☐ Combined

33c follow-up if class is combined: How do you divide the time and lessons?

33d. Have you seen the *READ 180* / SPI alignment guide? If so, do you use it at all? ☐ yes..... *has seen*.....no ☐ ☐ yes.....*uses* .....no ☐

33d follow-up if both answers are yes: How do you use the alignment guide?

Questions for the observer to answer immediately after the observation:

34. What was the length of time students were expected to be working during the observed *READ 180* section (i.e., length of class time minus all of the following that occurred: time for arrival, getting ready or lining up for dismissal, or other events that took up class time)?	☐ less than 60 minutes ☐ 60 to 80 minutes ☐ 81 to 87 minutes ☐ 88 to 95 minutes ☐ 96 or more minutes
35. Did the classroom have designated spaces for whole-group and small-group instruction, independent reading, and computer workstations (i.e., spaces that were made distinct by signs or furniture arrangement)?	☐ yes ☐ no
36. Did at least five of the computers appear to work and run *READ 180* software?	☐ yes ☐ no
37. Did students seem to have access to personal audio equipment (e.g., tape players, CD players, or additional computers; headphones) during independent reading? *(Please ask the teacher if no students used audio equipment.)*	☐ yes, 4 to 7 individual players ☐ yes, 1 to 3 individual players ☐ yes, 1 player; many headphones ☐ no
38. Did students seem to have a clear idea of what was expected of them during rotations (e.g., students went to rotation "centers" as if accustomed; students easily identified what books they were reading or what computer lessons they were on; students expected guidance from the teacher during small-group instruction)?	computer use ☐ yes ☐ no independent reading ☐ yes ☐ no small-group instruction ☐ yes ☐ no

Additional Notes:

OBSERVATION CHECKLIST
MEMPHIS CITY SCHOOLS

Observer: _____ Teacher: _____

Date: _____ School: _____

Objective: _____

Note: Information with an asterisk (*) may be obtained through teacher interview or review of student reports.

INITIAL IMPRESSION	1 Not at All	2 Somewhat	3 Mostly	4 Completely
1. Teacher has been trained and is effectively managing and interacting with students according to the model.*				
2. READ 180 books, trade books, and classroom libraries are complete, leveled and accessible.				
3. Students are actively engaged in whole group instruction or a rotation.				
4. At least five computer workstations are functional and READ 180 is operational for students.				
5. Teacher workstation is functional and SMS is installed and operational.				
6. Room is arranged with appropriate space for independent reading, small group instruction, whole group instruction, and computer workstations.				

ORGANIZATION	YES	NO
1. There are 21 or less in the room.		
2. Small group rotations consist of seven students or less.		

	1 Not at All	2 Somewhat	3 Mostly	4 Completely
3. Furniture is arranged to allow for effective rotations.				
4. Students have been placed according to initial SRI and are grouped flexibly according to data generated by reports.*				
5. Classroom management is effective and rotations move smoothly.				
6. Reports generated by the READ 180 software are available for progress monitoring.*				
7. Student reading logs, portfolios, journals, etc. are organized and accessible.				
8. The total class period is arranged according to the READ 180 model: 20 minutes whole group instruction, three 20-minute rotations (small group instruction, independent reading, individual software instruction), and wrap-up activities.				

WHOLE GROUP INSTRUCTION	1 Not at All	2 Somewhat	3 Mostly	4 Completely
1. Teacher provides whole group direct instruction using modeling, shared reading, or mini-lessons.				
2. Teacher uses READ 180 resources for instruction.*				
3. Teacher brings closure to the class based on the day's objective; reviewing, reading aloud, building community, sharing, discussing, or reflecting.				
4. Students use Rbooks or Flexbooks for skill development.				
SMALL GROUP ROTATION				
1. Teacher interacts with students in small groups; focusing on skills, comprehension, and discussion related to the day's objective.				
2. Teacher differentiates instruction based on data generated by READ 180 software reports.*				
3. Students are actively involved in mini-lessons, discussions, writing activities, reflections, skill practice, etc., using READ 180 resources.				
COMPUTER ROTATION				
1. Students work on READ 180 software for twenty minutes.*				
2. Students are actively engaged in learning and remaining on task.				
INDEPENDENT READING ROTATION				
1. Students are actively engaged in Independent reading.				
2. Students successfully pass Reading Counts quizzes indicating comprehension of independent reading materials.*				
3. Teacher monitors student logs, reflections, RC quizzes, quick writes, and reports to ensure effective independent reading behavior.*				

Signature of observer: _____

OBSERVATION NOTES

Appendix C: Equations and Notes for READ 180 *Observation Ratings*

Data was gathered from RBS and MCS protocols on the 15 topics listed in the body of the report. Subsequently, information from the different components was combined as follows.

Component Weight

SG: Small-group rotation	(2 items)	4 units
CR: Computer rotation	(3 items)	4 units
WGI: Whole-group instruction, including wrap-up	(4 items)	3 units
Base (including classroom space and layout, number of students enrolled, timing, and class atmosphere)	(4 items)	2 units
IR: Independent reading rotation	(1 item)	1 unit

To calculate the weighted component ratings, the following equations were used

Base = (total of scores on 4 items) / 2

WGI = (total of scores on 4 items) * .75

SG = (total of scores on 2 items) * 2

CR = (total of scores on 3 items) / .75

IR = (score on one item)

OR = overall rating

The overall observation rating was calculated by totaling the weighted scores for the above five components of *READ 180.* The total possible points was 56, which was divided by 14 (total number of items used). This resulted in a number between 0 and 4, which was used as the classroom observation score.

$$OR = \frac{(Base + WGI + SG + CR + IR)}{14}$$

Appendix D
Specification of the Multi-Level (Cross-Sectional) Regression Models Employed to Test the One-Year and Two-Year Impacts of the *READ 180* Intervention in and Differences in *READ 180* Impact in MCLA Treatment and Control Schools

READ 180 Impact

Three multi-level regression models were employed to conduct cross-sectional analyses of the immediate and long-term, two-year impact of *READ 180* on student reading and subject area achievement at the end of Years 1 and 2 of the Memphis Striving Readers study. The first model estimated the immediate impact of *READ 180* for students in grades 6-8 in Year 1.

At the student level,

$$Y_{ij} = \beta_{0j} + \beta_1 X_{1ij} + \beta_2 X_{2ij} + \beta_3 X_{3ij} + \beta_4 X_{4ij} + \sum_{m=1}^{M} \beta_{(m+4)} X_{(m+4)ij} + r_{ij},$$

where

Y_{ij} is the Spring Year 1 test score (ITBS/TCAP) for student i in school j;

X_{1ij} is an uncentered dummy variable coded 0 for *READ 180* control and 1 for *READ 180* treatment students in school j;

X_{2ij} is a grand mean centered baseline test score (ITBS/TCAP) for student i in school j;

X_{3ij} is a grand mean centered dummy variable coded 1 for students in 7th grade and 0 otherwise;

X_{4ij} is an grand mean centered dummy variable coded 1 for students in 8th grade and 0 otherwise;

$X_{(m+4)ij}$ is the m^{th} of M additional student-level covariates that may be included in the final model depending on whether they satisfy criteria for inclusion;

β_{0j} is the adjusted mean Spring test score for the control students in school j, controlling for the baseline 2006 test score and other covariates;

β_1 is the adjusted difference between *READ 180* treatment and control group mean Spring test scores (the *READ 180* treatment effect), controlling for the baseline test score and other covariates;

β_2 is the slope of the regression of Spring test scores on baseline test scores;

β_3 is the adjusted difference between the mean 6th and 7th grade Spring test scores;

β_4 is the adjusted difference between the mean 6th and 8th grade Spring test scores;

β_{m+4} is the coefficient for the m^{th} of M additional student-level covariates that may be included in the final model depending on whether they satisfy criteria for inclusion; and

r_{ij} is a unique effect for student i in school j and is $\sim N(0,\sigma^2)$;

All of the above coefficients at the student level, except β_{0j}, are assumed constant across schools. β_{0j}, the adjusted mean Spring Year 1 test score for the control students in school j, is modeled as a function of school-level covariates:

$$\beta_{0j} = \gamma_{00} + \sum_{p=1}^{P} \gamma_{0p} W_{pj} + u_{0j},$$

where

W_{pj} is the p^{th} of P school-level covariates that may be included in the final model depending on whether they satisfy criteria for inclusion;

γ_{00} is the adjusted mean Spring test score for all control students;

γ_{0p} is the coefficient for the p^{th} of P school-level covariates that may be included in the final model depending on whether they satisfy criteria for inclusion; and

u_{0j} is the unique effect of school j and is ~N(0,τ).

The null hypothesis of no *READ 180* treatment effect on Spring test scores is H_0: $\beta_1 = 0$ and is tested with a *t*-statistic.

The second model estimated the immediate impact for students in each grade separately in Year 1 and for sixth-grade students in Year 2. The only difference in this second model was the exclusion of the two dichotomous covariates designating whether or not students were enrolled in grades 7 or 8. These covariates were not needed in the model used for students in a single grade.

The third model estimated the long-term, two-year impact of *READ 180* on students in grades 6 and 7 in Year 1 and in grades 7 and 8 in Year 2 (referred to as "stayers" in the report). The only difference in this third model from the first was the inclusion of only one dichotomous covariate designating whether or not students were enrolled in grade 8 in Year 2. The second model was also used to estimate the long-term, two-year impact of *READ 180* separately for the students going from sixth grade to seventh grade and for those going from seventh grade to eighth grade.

Differences in *READ 180* Impact in MCLA Treatment and Control Schools

The above three models were modified slightly to estimate the difference between the impacts of *READ 180* in MCLA treatment and control schools. The modification was to include a dichotomous, school-level variable indicating whether the school was an MCLA treatment or control school. At the school level, this variable was included in the specification of the adjusted mean of the *READ 180* control students and of the estimate of the *READ 180* impact.

At the student level, the coefficient estimating the *READ 180* was assumed to vary across schools:

$$Y_{ij} = \beta_{0j} + \boldsymbol{\beta}_{1j} X_{1ij} + \beta_2 X_{2ij} + \beta_3 X_{3ij} + \beta_4 X_{4ij} + \sum_{m=1}^{M} \beta_{(m+4)} X_{(m+4)ij} + r_{ij}.$$

where

β_{1j} is the adjusted difference between *READ 180* treatment and control group mean Spring test scores (the *READ 180* treatment effect) **for school *j***, controlling for the baseline test score and other covariates.

This allows modeling β_{1j} at the school level as a function of a school-level variable, specifically a dummy variable indicating whether or not the school participated in MCLA. All of the other student-level coefficients, except β_{0j}, are still assumed constant across schools. In this interaction model, β_{0j}, the adjusted mean Spring test score for the control students in school *j* is

expressed as a function of school-level covariates and the MCLA participation variable, and the *READ 180* treatment effect, β_{1j}, is expressed as a function of MCLA participation:

$$\beta_{0j} = \gamma_{00} + \gamma_{01} W_{1j} + \sum_{p=1}^{P} \gamma_{0(p+1)} W_{(p+1)j} + u_{0j} \text{ and}$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11} W_{1j},$$

where

W_{1j} is an uncentered dummy variable coded 0 for MCLA control schools and 1 for MCLA treatment schools;

$W_{(p+1)j}$ is the p^{th} of P school-level covariates that may be included in the final model depending on whether they satisfy criteria for inclusion;

γ_{00} is the adjusted mean Spring test score for *READ 180* control students in MCLA control schools;

γ_{01} is the adjusted difference between MCLA treatment and control school mean Spring test scores (the MCLA treatment effect, controlling for other school-level covariates);

$\gamma_{0(p+1)}$ is the coefficient for the p^{th} of P school-level covariates that may be included in the model depending on whether they satisfy criteria for inclusion;

u_{0j} is the unique effect of school j and is ~N(0,τ);

γ_{10} is the *READ 180* treatment effect for students in MCLA control schools; and

γ_{11} is the difference between the *READ 180* treatment effects in MCLA treatment and control schools.

The null hypothesis of no interaction between MCLA and *READ 180* treatment effects on test scores is H_0: $\gamma_{11} = 0$ and is tested with a *t*-statistic.

Appendix E: Descriptions of the Baseline Demographic Characteristics of Samples of Students for READ 180 *Impact Analyses in Years 1 through 4*

Equivalence on Student Demographic Characteristics

Samples for One-Year Impact Analyses

As described above, 1,740 eligible struggling readers were randomly assigned to the *READ 180* treatment or control groups in Year 1 of the MSRP study. The grade level and other demographic characteristics of these students are presented in Table E-1.

The number of students decreases as the enrollment grade increases, and this difference is reflected more strongly in the control group since approximately equal numbers were randomly assigned to the treatment group in each grade. These differences in grade enrollment between treatment and control groups emphasize the importance of treating the student's enrollment grade as a covariate in the analyses of *READ 180* impact for students from more than one grade. Also, all but two students were either African American or Hispanic, which supported the creation of two dichotomous covariates to represent membership in these two race/ethnicity groups. Finally, the differences in demographic composition of the treatment and control groups were relatively minor, although some were statistically significant given the large number of students overall. Including these characteristics as student-level covariates in the analytical models helps to control for these small differences, as well as reduce the within-school error variance in the dependent variables.

Table E-1: Demographic Characteristics of the Year 1 *READ 180* ITT Sample

Student Characteristic	Control*		*READ 180**		Signif. Level	Total*	
Enrolled in Grade 6	392	37.6%	239	34.2%	0.05	631	36.3%
Enrolled in Grade 7	370	35.5%	233	33.4%		603	34.7%
Enrolled in Grade 8	280	26.9%	226	32.4%		506	29.1%
Female	465	44.6%	286	41.0%	0.13	751	43.2%
Male	577	55.4%	412	59.0%		989	56.8%
African American	955	91.6%	657	94.1%	0.05	1612	92.6%
Hispanic	86	8.2%	40	5.7%	0.05	126	7.2%
Free or Reduced Lunch	931	89.3%	619	88.7%	0.66	1550	89.1%
English Language Learner	83	8.0%	34	4.9%	0.01	117	6.7%
Total	1042		698			1740	

Data sources: MCS enrollment and demographic files, 2006–2007
**Percentages are based on the total number of students in the control, treatment, or total group.*

In Year 2, 693 eligible struggling readers in sixth grade were randomly assigned to the *READ 180* treatment or control groups. The demographic characteristics of these students are

presented in Table E-2. Other than gender, where the control group has significantly more males, the treatment and control groups are quite similar.

Table E-2: Demographic Characteristics of the Year 2 Sixth-Grade *READ 180* ITT Sample

Student Characteristic	Control*		*READ 180**		Signif. Level	Total*	
Female	169	41.8%	143	49.5%	0.05	312	45.0%
Male	235	58.2%	146	50.5%		381	55.0%
African American	382	94.6%	274	94.8%	0.88	656	94.7%
Hispanic	21	5.2%	15	5.2%	1.00	36	5.2%
Free or Reduced Lunch	382	94.6%	276	95.5%	0.57	658	94.9%
English Language Learner	17	4.2%	14	4.8%	0.69	31	4.5%
Total	404		289			693	

Data sources: MCS enrollment and demographic files, 2007–2008
[a] *Percentages are based on the total number of students in the control, treatment, or total group.*

In Year 3, 497 eligible struggling readers in sixth grade were randomly assigned to the *READ 180* treatment or control groups. The demographic characteristics of these students are presented in Table E-4. The treatment and control groups are similar in terms of gender and free or reduced lunch status composition. The groups differ in terms of race/ethnicity and ELL status, however, with the control group having significantly fewer African-American students and more Hispanic and ELL students.

Table E-3: Demographic Characteristics of the Year 3 Sixth-Grade *READ 180* ITT Sample

Student Characteristic	Control*		*READ 180**		Signif. Level	Total*	
Female	102	45.7%	131	47.8%	0.65	233	46.9%
Male	121	54.3%	143	52.2%		264	53.1%
African American	204	91.5%	265	96.7%	0.01	469	94.4%
Hispanic	18	8.1%	9	3.3%	0.02	27	5.4%
Free or Reduced Lunch	209	93.7%	265	96.7%	0.11	497	95.4%
English Language Learner	16	7.2%	7	2.6%	0.02	23	4.6%
Total	223		274			497	

Data sources: MCS enrollment and demographic files, 2008–2009
**Percentages are based on the total number of students in the control, treatment, or total group.*

In Year 4, 497 eligible struggling readers in sixth grade were randomly assigned to the *READ 180* treatment or control groups. The demographic characteristics of these students are presented in Table E-4. The treatment and control groups are similar in terms of gender and free or reduced lunch status composition. The groups differ in terms of race/ethnicity and ELL status, however, with the control group having significantly more African-American, Hispanic, and ELL students.

Table E-4: Demographic Characteristics of the Year 4 Sixth-Grade *READ 180* ITT Sample

Student Characteristic	Control*		*READ 180**		Signif. Level	Total*	
Female	132	51.0%	118	49.6%		250	50.3%
Male	127	49.0%	120	50.4%	0.76	247	49.7%
African-American	241	93.1%	232	97.5%	0.02	473	95.2%
Hispanic	18	6.9%	6	2.5%	0.02	24	4.8%
Free or Reduced Lunch	256	98.8%	234	98.3%	0.62	490	98.6%
English Language Learner	20	7.7%	6	2.5%	0.01	26	5.2%
Total	259		238			497	

Data sources: MCS enrollment and demographic files, 2009–2010
**Percentages are based on the total number of students in the control, treatment, or total group.*

In Year 4, several analytic samples were created to test the one-year or two-year impact of *READ 180* on student achievement. Table E-5 presents the demographic characteristics of the sample of 2298 sixth grade students from Years 1 through 4. The treatment and control groups are similar in terms of gender and free or reduced lunch status composition. The groups differ in terms of race/ethnicity and ELL status, however, with the control group having significantly more African-American, Hispanic, and ELL students.

Table E-5: Demographic Characteristics of the Sixth-Grade *READ 180* ITT Sample, Years 1-4

Student Characteristic	Control*		*READ 180**		Signif. Level	Total*	
Female	574	45.4%	495	47.9%		1069	46.5%
Male	690	54.6%	539	52.1%	0.24	1229	53.3%
African-American	1174	92.9%	992	95.9%	0.00	2166	94.3%
Hispanic	88	7.0%	41	4.0%	0.00	129	5.6%
Free or Reduced Lunch	1193	94.4%	982	95.0%	0.53	2175	94.6%
English Language Learner	81	6.4%	35	3.4%	0.00	116	5.0%
Total	1264		1034			2298	

Data sources: MCS enrollment and demographic files, 2006–2007 through 2009–2010
**Percentages are based on the total number of students in the control, treatment, or total group.*
Note: The current sample size is slightly smaller than the cumulative sample size of the past four years because students who were retained in grade have been removed from the current analyses.

Table E-6 presents the demographic characteristics of the sample of 3407 students in sixth, seventh, and eighth grades in Years 1 through 4 with one year of treatment. The treatment and control groups are similar in terms of gender and free or reduced lunch status composition. The groups differ in terms of race/ethnicity and ELL status, however, with the control group having significantly more African-American, Hispanic, and ELL students.

Table E-6: Demographic Characteristics of the *READ 180* ITT Sample Students with One Year of Treatment All Grades, All Years

Student Characteristic	Control*		*READ 180**		Signif. Level	Total*	
Female	868	45.4%	677	45.3%		1545	45.3%
Male	1046	54.6%	816	54.7%	1.00	1862	54.7%
African-American	1768	92.4%	1422	95.2%	0.00	3190	93.6%
Hispanic	143	7.5%	70	4.7%	0.00	213	6.3%
Free or Reduced Lunch	1765	92.2%	1388	93.0%	0.41	3153	92.5%
English Language Learner	136	7.1%	61	4.1%	0.00	197	5.8%
Total	1914		1493			3407	

Data sources: MCS enrollment and demographic files, 2006–2007 through 2009–2010
**Percentages are based on the total number of students in the control, treatment, or total group.*
Note: The current sample size is slightly smaller than the cumulative sample size of the past four years because students who were retained in grade have been removed from the current analyses.

Samples for Two-Year Impact Analyses

In Year 2, 820 students in the seventh and eighth grades remained enrolled in a participating school out of the 1,234 eligible struggling readers in the sixth and seventh grades in the Year 1 *READ 180* ITT group. The demographic characteristics of these "stayers," compared with the 414 "leavers" who were not in a participating school on May 13, 2008, are presented in Table E-7.

Table E-7: Demographic Characteristics of the Year 2 "Stayers" and "Leavers" from the Year 1 *READ 180* ITT Sample

Student Characteristic	Control*					Read *180**				
	"Stayers"		*"Leavers"*		Signif. Level	*"Stayers"*		*"Leavers"*		Signif. Level
Enrolled in Grade 6 → 7	260	-51.90%	132	-50.60%	0.73	160	-50.20%	79	-51.60%	0.76
Enrolled in Grade 7 → 8	241	-48.10%	129	-49.40%		159	-49.80%	74	-48.40%	
Female	236	-47.10%	118	-45.20%	0.62	139	-43.60%	61	-39.90%	0.45
Male	265	-52.90%	143	-54.80%		180	-56.40%	92	-60.10%	
African American	457	-91.20%	238	-91.20%	0.89	297	-93.10%	144	-94.10%	0.68
Hispanic	43	-8.60%	22	-8.40%	1.00	21	-6.60%	9	-5.90%	0.76
Free or Reduced Lunch	440	-87.80%	240	-92.00%	0.08	287	-90.00%	137	-89.50%	0.37
English Language Learner	46	-9.20%	19	-7.30%	0.37	18	-5.60%	7	(%)	0.63
Total	501		261			319		153		

Data sources: MCS enrollment and demographic files, 2006–2007 and 2007–2008
**Percentages are based on the total for the control and treatment groups for each type of student.*

In Year 3, 475 seventh-grade students remained enrolled in a participating school out of the 693 eligible struggling readers in the sixth grade in the Year 2 *READ 180* ITT group. The demographic characteristics of these "stayers," compared with the 140 "leavers" who were not in a participating school on May 6, 2009, are presented in Table E-8.

Differences between treatment and control groups for the 475 seventh-grade students in Year 3 who remained in the *READ 180* ITT sample are not statistically significant. The largest disparity between the groups is in the gender composition, but even these differences have a significance level greater than 0.05. Among the 140 "leavers", there are no significant differences between the treatment and control groups' demographic characteristics.

Table E-8: Demographic Characteristics of the Year 3 Seventh-Grade "Stayers" and "Leavers" from the Year 2 *READ 180* ITT Sample

	Control*					Read *180**				
Student Characteristic	***"Stayers"***		***"Leavers"***		**Signif. Level**	***"Stayers"***		***"Leavers"***		**Signif. Level**
Female	127	45.50%	31	36.50%	0.14	105	53.60%	21	38.20%	0.04
Male	152	54.50%	54	63.50%		91	46.40%	34	61.80%	
African American	264	94.60%	81	95.30%	0.81	185	94.40%	55	100%	0.07
Hispanic	15	5.40%	4	4.70%	0.81	11	5.60%	0	0%	0.07
Free or Reduced Lunch	262	93.90%	80	94.10%	0.94	189	96.40%	50	90.90%	0.09
English Language Learner	13	4.70%	3	3.50%	0.66	11	5.60%	0	0%	0.07
Total	279		85			196		55		

Data sources: MCS enrollment and demographic files, 2007–2008 through 2008–2009
**Percentages are based on the total for the control and treatment groups for each type of student.*

Table E-9 presents the demographic characteristics of the sample of 312 seventh grade "stayers" in Year 4 with two years of treatment. Stayers are students who were in a participating school on May 7, 2010. The treatment and control groups do not differ significantly on any of these demographic characteristics.

Table E-9: Demographic Characteristics of the Year 4 Seventh-Grade "Stayers" in *READ 180* ITT Sample

Student Characteristic	Control*		*READ 180**		Signif. Level	Total*	
Female	70	49.6%	83	48.5%		153	49.0%
Male	71	50.4%	88	51.5%	0.846	159	51.0%
African-American	130	92.2%	164	95.9%	0.162	294	94.2%
Hispanic	10	7.1%	7	4.1%	0.245	17	5.4%
Free or Reduced Lunch	131	92.9%	162	94.7%	0.501	293	93.9%
English Language Learner	7	5.0%	5	2.9%	0.351	12	3.8%
Total	141		171			312	

Data sources: MCS enrollment and demographic files, 2008–2009 and 2009–2010
**Percentages are based on the total number of students in the control, treatment, or total group.*

Lastly, Table E-10 presents the demographic characteristics of the sample of 1601 seventh and eighth grade "stayers" in Years 1 through 4 with two years of treatment. The treatment and control groups do not differ significantly, except that the control group has significantly more ELL students than the treatment group.

Table E-10: Demographic Characteristics of the Seventh- and Eighth-Grade "Stayers" in *READ 180* ITT Sample Students with Two Years of Treatment, All Years

Student Characteristic	Control*		*READ 180**		Signif. Level	Total*	
Female	430	46.9%	327	47.7%		757	47.3%
Male	486	53.1%	358	52.3%	0.753	844	52.7%
African-American	846	92.4%	646	94.3%	0.126	1492	93.2%
Hispanic	68	7.4%	38	5.5%	0.135	106	6.6%
Free or Reduced Lunch	829	90.5%	637	93.0%	0.076	1466	91.6%
English Language Learner	66	7.2%	33	4.8%	0.05	99	6.2%
Total	916		685			1601	

Data sources: MCS enrollment and demographic files, 2006–2007 through 2009–2010
**Percentages are based on the total number of students in the control, treatment, or total group.*
Note: The current sample size is slightly smaller than the cumulative sample size of the past four years because students who were retained in grade have been removed from the current analyses.

Appendix F: Descriptions of the Baseline Achievement Characteristics of Samples of Students for READ 180 *Impact Analyses in Years 1 through 4*

Equivalence on Baseline Achievement

Year 1. Comparisons between treatment and control groups on the baseline 2006 ITBS and TCAP test scores were carried out for the 1,740 students in the Year 1 ITT sample and the 820 Year 2 "stayers." Treatment and control comparisons were made on the baseline 2007 ITBS and TCAP test scores for the Year 2 sixth-grade ITT sample and on the baseline 2008 ITBS and TCAP test scores for the Year 3 sixth-grade ITT sample.

Table 30 describes the differences between Year 1 *READ 180* treatment and control groups on baseline 2006 test scores for the three ITBS standard scores and the four TCAP content area assessments. With random assignment, the treatment and control groups should be very similar on all seven test scores.

The treatment group performed higher on all seven tests. However, the significance level for each estimated difference is greater than 0.05, allowing one to conclude that the treatment and control groups are statistically equivalent in terms of their baseline 2006 ITBS and TCAP test scores.

Table F-1: Comparison of Year 1* READ 180 *Treatment and Control Groups on Baseline 2006 Scores on Each Achievement Test

Test Score	Means		Signif. Level
	Control	*READ 180*	
ITBS Total Reading Standard Score	190.2 (940)*	191.5 (656)	0.097
ITBS Comprehension Standard Score	186.2 (944)	188.0 (660)	0.059
ITBS Vocabulary Standard Score	194.1 (950)	195.1 (658)	0.354
TCAP Reading/LA Scale Score	474.8 (1042)	476.5 (698)	0.188
TCAP Mathematics Scale Score	484.4 (1040)	487.4 (697)	0.062
TCAP Science Scale Score	179.1 (1006)	180.5 (686)	0.116
TCAP Social Studies Scale Score	184.0 (1007)	184.5 (685)	0.593

Data sources: ITBS and TCAP, 2006
**Numbers in parentheses are the numbers of students in each group having a valid test score.*

Year 2. Table 31 describes the differences between Year 2 sixth-grade *READ 180* treatment and control groups on baseline 2007 tests. Again, with random assignment, the 693 students in the treatment and control groups should be very similar on all seven test scores.

Table F-2: Comparison of Year 2 Sixth-Grade* READ 180 *Treatment and Control Groups on Baseline 2007 Scores on Each Achievement Test

Test Score	Means		Signif. Level
	Control	*READ 180*	
ITBS Total Reading Standard Score	184.9 (364)*	182.0 (247)	0.007
ITBS Comprehension Standard Score	182.8 (365)	179.7 (247)	0.014
ITBS Vocabulary Standard Score	186.9 (365)	184.7 (252)	0.104
TCAP Reading/LA Scale Score	487.8 (403)	482.4 (289)	0.004
TCAP Mathematics Scale Score	489.8 (403)	487.3 (289)	0.208
TCAP Science Scale Score	184.4 (400)	182.8 (283)	0.204
TCAP Social Studies Scale Score	189.5 (399)	188.9 (283)	0.551

Data sources: ITBS and TCAP, 2007
**Numbers in parentheses are the numbers of students in each group having a valid test score.*

The control group performed higher on all seven test scores. This advantage was statistically significant for the ITBS Comprehension and Total Reading standard scores and for the TCAP Reading/LA scale score. Thus, even though students were assigned to treatment and control groups randomly, the control group scored significantly higher on most of the baseline reading measures. Treating the 2007 test scores as covariates in the analyses of the impact of *READ 180* on 2008 test scores allows some adjustment to be made for these differences.

Year 3. Table 32 describes the differences between Year 3 sixth-grade *READ 180* treatment and control groups on baseline 2008 test scores. The two groups have the same initial achievement level; there are no statistically significant differences in their baselines ITBS and TCAP test scores.

Table F-3: Comparison of Year 3 Sixth-Grade* READ 180 *Treatment and Control Groups on Baseline 2008 Scores on Each Achievement Test

Test Score	Means		Signif. Level
	Control	*READ 180*	
ITBS Total Reading Standard Score	183.0 (205)*	183.1 (237)	0.886
ITBS Comprehension Standard Score	178.6 (215)	179.0 (263)	0.827
ITBS Vocabulary Standard Score	187.5 (205)	187.3 (238)	0.929
TCAP Reading/LA Scale Score	482.2 (222)	482.1 (273)	0.950
TCAP Mathematics Scale Score	482.8 (222)	482.2 (273)	0.804
TCAP Science Scale Score	180.2 (222)	180.6 (273)	0.762
TCAP Social Studies Scale Score	187.3 (219)	187.1 (273)	0.873

Data sources: ITBS and TCAP, 2008
**Numbers in parentheses are the numbers of students in each group having a valid test score.*

Year 4. Table 33 describes the differences between Year 4 sixth-grade *READ 180* treatment and control groups on baseline 2009 test scores. The two groups have the same initial achievement level; there are no statistically significant differences in their baselines ITBS and TCAP test scores.

Table F-4: Comparison of Year 4 Sixth-Grade* READ 180 *Treatment and Control Groups on Baseline 2009 Scores on Each Achievement Test

Test Score	Means		Signif. Level
	Control	*READ 180*	
ITBS Total Reading NCE Score	23.75 (242)*	22.09 (215)	0.103
ITBS Comprehension NCE Score	25.46 (242)	25.12 (216)	0.734
ITBS Vocabulary NCE Score	24.89 (243)	22.67 (215)	0.057
TCAP Reading/LA Scale Score	475.0 (259)	472.8 (238)	0.297

Data source: ITBS and TCAP, 2009

**Numbers in parentheses are the numbers of students in each group having a valid test score.*

Appendix G: Complete Results of Multi-Level Analyses of READ 180 One-Year and Two-Year Impacts on Student Achievement in Year 1 through Year 4

Table G-1: Final Model for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 ITBS Total Reading Scores of Students in All Grades in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	192.60	0.55	4	349.13	0.000
	Percent African American	0.95	0.52	4	1.82	0.142
	Percent Female	0.64	0.35	4	1.84	0.138
	Percent ELL	1.81	0.77	4	2.34	0.076
Student	Grade 7	5.64	0.94	1214	5.98	0.000
	Grade 8	12.37	1.07	1214	11.54	0.000
	READ 180	**-0.50**	**0.81**	**1214**	**-0.63**	**0.532**
	ELL	-3.62	1.66	1214	-2.17	0.030
	ITBS Total Reading 06	0.04	0.03	1214	16.11	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.17	0.005			
Student	Level 1	185.34				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-2: Final Model for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 ITBS Comprehension Scores of Students in All Grades in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	186.99	0.72	3	260.55	0.000
	Percent African American	1.89	0.68	3	2.77	0.068
	Percent SPED	-0.71	0.22	3	-3.22	0.070
	Percent ELL	2.12	0.91	3	2.33	0.091
	Size	0.01	0.00	3	2.15	0.111
Student	Grade 7	7.15	1.16	1223	6.19	0.000
	Grade 8	10.90	1.28	1223	8.54	0.000
	READ 180	**-0.03**	**1.03**	**1223**	**-0.03**	**0.976**
	Gender	3.69	0.99	1223	3.74	0.000
	Hispanic	5.41	3.81	1223	1.42	0.155
	ELL	-7.75	3.85	1223	-2.01	0.044
	ITBS Comprehension 06	0.37	0.03	1223	12.99	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.22	0.008			
Student	Level 1	293.34				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-3: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 ITBS Vocabulary Scores of Students in All Grades in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	197.47	0.67	6	293.73	0.000
	Percent ELL	0.48	0.16	6	3.05	0.024
Student	Grade 7	5.25	1.22	1237	4.31	0.000
	Grade 8	15.97	1.36	1237	11.75	0.000
	READ 180	**0.08**	**1.02**	**1237**	**0.08**	**0.937**
	Gender	-2.10	1.01	1237	-2.08	0.037
	Hispanic	-4.71	2.10	1237	-2.24	0.025
	ITBS Vocabulary 06	0.35	0.03	1237	13.05	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.02	0.003			
Student	Level 1	310.37				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-4: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* 2007 TCAP Reading/LA Scores of Students in All Grades in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	496.76	0.86	4	574.83	0.000
	Percent African American	2.21	0.80	4	2.75	0.051
	Percent Female	2.49	0.54	4	4.64	0.009
	Percent ELL	3.71	1.18	4	3.14	0.042
Student	Grade 7	8.79	1.51	1624	5.83	0.000
	Grade 8	13.42	1.62	1624	8.28	0.000
	READ 180	**0.36**	**1.31**	**1624**	**0.28**	**0.781**
	Gender	3.89	1.28	1624	3.03	0.003
	Hispanic	8.51	4.93	1624	1.72	0.084
	FRL	-5.44	2.04	1624	-2.66	0.008
	ELL	-15.17	5.07	1624	-2.99	0.003
	TCAP Reading 06	0.33	0.03	1624	12.88	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.17	0.012			
Student	Level 1	658.24				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-5: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 TCAP Mathematics Scores of Students in All Grades in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	500.05	1.26	5	397.76	0.000
	Percent Female	-1.12	0.72	5	-1.56	0.179
	Percent FRL	-1.05	0.47	5	-2.24	0.074
Student	Grade 7	2.77	1.62	1621	1.71	0.088
	Grade 8	8.00	1.72	1621	4.63	0.000
	READ 180	**0.17**	**1.42**	**1621**	**0.12**	**0.904**
	Gender	5.52	1.38	1621	4.01	0.000
	African American	67.13	19.51	1621	3.44	0.001
	Hispanic	77.96	20.17	1621	3.87	0.000
	ELL	-7.82	5.44	1621	-1.44	0.150
	TCAP Math 06	0.51	0.02	1621	24.09	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	5.65	0.021			
Student	Level 1	754.78				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-6: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 TCAP Science Scores of Students in All Grades in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	185.62	0.57	5	324.04	0.000
	Percent SPED	-0.25	0.12	5	-2.00	0.100
	Size	-0.01	0.00	5	-4.43	0.007
Student	Grade 7	-2.42	1.65	1551	-1.47	0.143
	READ 180	**-0.48**	**0.76**	**1551**	**-0.63**	**0.528**
	ELL	-5.19	1.15	1551	-4.53	0.000
	TCAP Science 06	0.22	0.01	1551	15.57	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.03	0.008			
Student	Level 1	258.61				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-7: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 TCAP Social Studies Scores of Students in All Grades in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	185.16	1.24	7	149.02	0.000
Student	***READ 180***	**0.81**	**0.67**	**1545**	**1.21**	**0.226**
	African American	3.02	1.41	1545	2.14	0.033
	FRL	-1.36	0.73	1545	-1.85	0.064
	TCAP Social Studies 06	0.22	0.04	1545	5.68	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	7.98	0.034			
Student	Level 1	246.20				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-8: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 ITBS Total Reading Scores of Sixth-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	183.78	0.65	7	282.77	0.000
Student	***READ 180***	**0.45**	**1.05**	**460**	**0.43**	**0.665**
	FRL	-3.06	1.64	460	-1.87	0.061
	ELL	-5.61	2.15	460	-2.61	0.010
	ITBS Total Reading 06	0.53	0.04	460	13.08	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	.03	.000			
Student	Level 1	164.64				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-9: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 ITBS Comprehension Scores of Sixth-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	180.32	0.83	7	218.70	0.000
Student	***READ 180***	**-1.03**	**1.34**	**460**	**-0.77**	**0.441**
	Gender	4.35	1.30	460	3.32	0.001
	African American	-10.18	5.78	460	-1.76	0.079
	FRL	-3.76	2.09	460	-1.80	0.071
	ELL	-15.19	5.98	460	-2.54	0.012
	ITBS Comprehension 06	0.42	0.04	460	9.43	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.82	0.003			
Student	Level 1	234.99				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-10: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 ITBS Vocabulary Scores of Sixth-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	186.81	0.88	6	211.51	0.000
	Percent ELL	0.49	0.51	6	2.38	0.054
Student	***READ 180***	**2.68**	**1.40**	**464**	**1.92**	**0.056**
	Gender	-2.47	1.37	464	-1.80	0.072
	ELL	-7.20	2.90	464	-2.49	0.013
	ITBS Vocabulary 06	0.39	0.04	464	9.83	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	3.24	0.012			
Student	Level 1	263.97				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-11: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 TCAP Reading/LA Scores of Sixth-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	488.88	1.37	4	357.45	0.000
	Percent African American	2.69	1.30	4	2.07	0.104
	Percent Female	2.95	0.85	4	3.47	0.037
	Percent ELL	3.86	1.92	4	2.01	0.112
Student	***READ 180***	**0.01**	**2.17**	**590**	**0.01**	**0.996**
	Gender	4.99	2.09	590	2.39	0.017
	African American	-15.14	8.30	590	-1.82	0.068
	FRL	-7.26	3.54	590	-2.05	0.040
	ELL	-17.42	8.93	590	-1.95	0.051
	TCAP Reading 06	0.33	0.04	590	7.49	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	22.40	0.030			
Student	Level 1	718.44				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-12: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 TCAP Mathematics Scores of Sixth-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	492.27	1.52	5	323.93	0.000
	Percent African American	0.58	0.33	5	1.72	0.145
	Size	0.03	0.01	5	3.44	0.024
Student	***READ 180***	**2.38**	**2.19**	**592**	**1.09**	**0.279**
	Gender	4.63	2.09	592	2.21	0.027
	African American	-5.93	4.48	592	-1.33	0.186
	TCAP Math 06	0.53	0.04	592	13.55	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	15.02	0.018			
Student	Level 1	839.38				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-13: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 TCAP Science Scores of Sixth-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	186.55	.85	5	220.66	0.000
	Percent Female	-1.01	0.50	5	-2.01	0.100
	Percent ELL	-0.72	0.26	5	-2.82	0.038
Student	***READ 180***	**1.04**	**1.30**	**565**	**0.80**	**0.423**
	Gender	-1.71	1.27	565	-1.35	0.178
	African American	-8.75	5.84	565	-1.50	0.135
	ELL	-9.85	7.37	565	-1.34	0.182
	TCAP Science 06	0.26	0.04	565	6.47	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	3.00	0.012			
Student	Level 1	243.54				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-14: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 TCAP Social Studies Scores of Sixth-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	186.67	1.42	6	131.07	0.000
	Percent ELL	-0.62	0.39	6	-1.60	0.159
Student	***READ 180***	**0.76**	**1.51**	**567**	**0.50**	**0.615**
	Social Studies 06	0.30	0.05	567	6.08	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	17.37	0.052			
Student	Level 1	314.03				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-15: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 ITBS Total Reading Scores of Sixth-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	193.57	.90	6	214.91	0.000
	Percent SPED	-38.52	0.23	6	-1.71	0.138
Student	***READ 180***	**-2.26**	**1.37**	**419**	**-1.65**	**0.099**
	ITBS Reading Total 06	0.42	0.04	419	10.10	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	3.25	0.014			
Student	Level 1	230.90				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-16: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 ITBS Comprehension Scores of Seventh-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	188.92	1.18	3	159.53	0.000
	Percent African American	3.75	1.13	3	3.30	0.071
	Percent SPED	-1.23	0.37	3	-3.31	0.071
	Percent ELL	4.10	1.53	3	2.69	0.070
	Size	0.01	0.01	3	1.73	0.179
Student	***READ 180***	**-1.56**	**1.80**	**421**	**-0.87**	**0.384**
	Gender	2.70	1.74	421	1.55	0.121
	ITBS Comprehension 06	0.35	0.05	421	7.43	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	8.83	0.025			
Student	Level 1	345.99				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-17: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 ITBS Vocabulary Scores of Seventh-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	197.79	1.14	6	173.11	0.000
	Percent African American	-0.27	0.18	6	-1.50	0.184
Student	***READ 180***	**-2.07**	**1.77**	**428**	**-1.17**	**0.244**
	ITBS Vocabulary 06	0.36	.04	428	8.61	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	1.53	0.004			
Student	Level 1	377.19				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-18: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 TCAP Reading/LA Scores of Seventh-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	497.91	1.38	6	361.50	0.000
	Percent Female	1.19	0.73	6	1.64	0.152
Student	***READ 180***	**0.27**	**1.94**	**564**	**0.14**	**0.890**
	ELL	-7.90	3.57	564	-2.21	0.027
	TCAP Reading 06	0.36	0.04	564	9.46	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	7.80	0.013			
Student	Level 1	599.19				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-19: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 TCAP Mathematics Scores of Seventh-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	502.33	3.00	6	167.31	0.000
	Percent FRL	-2.44	1.20	6	-2.02	0.088
Student	***READ 180***	**-3.24**	**2.36**	**563**	**-1.37**	**0.171**
	Gender	6.15	2.28	563	2.70	0.008
	TCAP Math 06	0.58	0.04	563	15.46	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	79.05	0.072			
Student	Level 1	1024.75				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*
† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-20: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 TCAP Science Scores of Seventh-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	183.84	1.03	6	178.53	0.000
	Percent FRL	-1.01	0.34	6	-2.99	0.026
Student	***READ 180***	**-2.62**	**1.59**	**539**	**-1.64**	**0.101**
	FRL	4.22	2.49	539	1.70	0.090
	ELL	-8.29	3.61	539	-2.29	0.022
	TCAP Science 06	0.22	0.04	539	4.96	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	1.95	0.005			
Student	Level 1	357.42				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*
† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-21: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 TCAP Social Studies Scores of Seventh-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	183.58	1.08	6	169.89	0.000
	Percent FRL	-1.38	0.40	6	-3.48	0.016
Student	***READ 180***	**1.58**	**1.30**	**535**	**1.22**	**0.225**
	TCAP Social Studies 06	0.15	0.03	535	4.83	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	13.13	0.054			
Student	Level 1	229.26				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-22: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 ITBS Total Reading Scores of Eighth-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	202.59	1.32	5	153.95	0.000
	Percent Female	1.46	0.79	5	1.86	.122
	Percent ELL	1.31	0.39	5	3.34	0.026
Student	***READ 180***	**0.54**	**1.81**	**329**	**0.30**	**0.766**
	ELL	-8.99	4.36	329	-2.06	0.040
	ITBS Total Reading 06	0.36	0.06	329	6.19	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	8.75	0.029			
Student	Level 1	293.19				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-23: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 ITBS Comprehension Scores of Eighth-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	194.54	1.54	4	126.50	0.000
	Percent Female	176.89	0.93	4	1.90	0.128
	Percent ELL	154.63	0.46	4	3.34	0.039
	Percent FRL	-88.74	0.48	4	-1.86	0.134
Student	***READ 180***	**1.17**	**2.17**	**330**	**0.54**	**0.589**
	African American	31.47	19.82	330	1.59	0.113
	Hispanic	45.71	21.12	330	2.16	0.031
	ELL	-23.20	8.27	330	-2.80	0.006
	ITBS Comprehension 06	0.35	0.06	330	6.37	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	19.73	0.044			
Student	Level 1	432.82				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-24: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 ITBS Vocabulary Scores of Eighth-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	211.17	1.58	4	133.99	0.000
	Percent SPED	2.11	92.74	4	2.28	0.081
	Percent ELL	1.29	51.29	4	2.52	0.063
	Percent FRL	-1.93	98.82	4	-1.95	0.120
Student	***READ 180***	**-0.74**	**2.26**	**337**	**-0.33**	**0.742**
	ITBS Vocabulary 06	0.29	0.06	337	4.82	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	.14	0.000			
Student	Level 1	454.56				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-25: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 TCAP Reading/LA Scores of Eighth-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	507.71	2.17	4	233.63	0.000
	Percent Female	2.48	1.17	4	2.11	0.099
	Percent ELL	2.44	0.73	4	3.35	0.039
	Size	-0.03	0.01	4	-2.86	0.048
Student	***READ 180***	**-1.80**	**2.99**	**456**	**-0.60**	**0.546**
	Gender	6.90	2.77	456	2.50	0.013
	African American	39.87	29.65	456	1.35	0.179
	Hispanic	55.27	31.29	456	1.77	0.078
	FRL	-6.54	4.17	456	-1.57	0.117
	ELL	-25.36	11.33	456	-2.24	0.026
	TCAP Reading 06	0.31	0.05	456	5.74	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	10.80	0.011			
Student	Level 1	944.31				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-26: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 TCAP Mathematics Scores of Eighth-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	508.93	2.10	3	242.83	0.000
	Percent SPED	2.67	1.15	3	2.31	0.093
	Percent ELL	3.13	0.75	3	4.17	0.045
	Percent FRL	-2.86	1.23	3	-2.34	0.091
	Size	-0.03	0.01	3	-3.38	0.071
Student	***READ 180***	**-1.03**	**2.90**	**454**	**-0.36**	**0.721**
	Gender	3.60	2.69	454	1.34	0.181
	African American	170.34	28.66	454	5.94	0.000
	Hispanic	189.46	30.31	454	6.25	0.000
	ELL	-16.57	11.11	454	-1.49	0.136
	TCAP Math 06	0.45	0.03	454	13.85	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	53.29	0.042			
Student	Level 1	1219.24				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-27: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 TCAP Science Scores of Eighth-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	188.01	1.02	6	184.62	0.000
	Size	-0.02	0.00	6	-6.79	.000
Student	***READ 180***	**-1.68**	**1.41**	**435**	**-1.19**	**0.234**
	Gender	-2.06	1.33	435	-1.55	0.121
	TCAP Science 06	0.18	0.04	435	5.01	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	25.91	0.115			
Student	Level 1	200.01				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-28: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2007 TCAP Social Studies Scores of Eighth-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	184.92	1.64	7	112.54	0.000
Student	***READ 180***	**0.05**	**1.47**	**435**	**0.03**	**0.976**
	African American	27.48	14.47	435	1.90	0.058
	Hispanic	20.53	15.03	435	1.37	0.173
	TCAP Social Studies 06	0.30	0.05	435	6.26	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	14.24	0.060			
Student	Level 1	224.56				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-29: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2008 ITBS Total Reading Scores of Sixth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	184.43	0.65	6	283.34	0.000
	Percent SPED	-0.54	0.17	6	-3.16	0.022
Student	***READ 180***	**-0.73**	**1.01**	**495**	**-0.73**	**0.468**
	ITBS Total Reading 07	0.45	0.04	495	11.36	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.01	0.017			
Student	Level 1	119.17				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-30: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2008 ITBS Comprehension Scores of Sixth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	181.85	0.91	7	199.87	0.000
Student	***READ 180***	**-1.83**	**1.33**	**499**	**-1.38**	**0.017**
	Gender	2.35	1.29	499	1.82	0.069
	ITBS Comprehension 07	0.40	0.04	499	9.56	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.77	0.005			
Student	Level 1	207.15				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-31: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2008 ITBS Vocabulary Scores of Sixth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	187.43	0.85	6	221.04	0.000
	Percent SPED	-0.82	0.22	6	-3.71	0.013
Student	***READ 180***	**-0.61**	**1.31**	**504**	**-0.47**	**0.639**
	FRL	4.81	2.88	504	1.67	0.096
	ITBS Vocabulary 07	0.33	0.04	504	8.36	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.01	0.012			
Student	Level 1	204.71				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*
† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-32: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2008 TCAP Reading/LA Scores of Sixth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	4494.66	1.61	5	306.47	0.000
	Percent SPED	0.99	0.42	5	2.36	0.063
	Enrollment	0.02	0.01	5	2.93	0.034
Student	***READ 180***	**1.89**	**2.28**	**662**	**0.83**	**0.407**
	Gender	6.93	2.16	662	3.21	0.002
	TCAP Reading 07	0.48	0.05	662	10.41	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	1.33	0.003			
Student	Level 1	758.82				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*
† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-33: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2008 TCAP Mathematics Scores of Sixth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	499.39	2.12	6	235.95	0.000
	Percent SPED	1.76	0.60	6	2.92	0.028
Student	***READ 180***	**-3.12**	**1.98**	**664**	**-1.58**	**0.115**
	TCAP Math 07	0.63	0.04	664	16.16	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	21.21	0.035			
Student	Level 1	593.54				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-34: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2008 TCAP Science Scores of Sixth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	186.55	0.77	6	240.89	0.000
	Percent Female	-0.59	0.35	6	-1.67	0.146
Student	***READ 180***	**-0.18**	**1.18**	**654**	**-0.16**	**0.876**
	Gender	-1.60	1.16	654	-1.38	0.169
	TCAP Science 07	0.33	0.03	654	9.60	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.15	0.001			
Student	Level 1	217.48				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-35: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on 2008 TCAP Social Studies Scores of Sixth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	187.77	1.14	3	162.66	0.000
	Percent African American	-3.52	1.21	3	-2.91	0.067
	Percent SPED	2.13	0.76	3	2.81	0.067
	Percent ELL	-3.99	1.65	3	-2.42	0.084
	Percent FRL	-1.76	0.79	3	-2.22	0.102
Student	***READ 180***	**-2.35**	**1.37**	**642**	**-1.71**	**0.087**
	Gender	-2.83	1.32	642	2.14	0.032
	African American	-14.02	5.44	642	-2.58	0.010
	ELL	-12.22	5.85	642	-2.09	0.037
	TCAP Social Studies 07	0.41	0.05	642	8.63	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	3.45	0.031			
Student	Level 1	275.22				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-36: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on Spring 2009 ITBS Reading Total Scores of Sixth-Graders in Year 3

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	184.22	0.92	4	200.27	0.000
	Percent Female	0.98	0.44	4	2.21	0.089
	Percent English Language Learners	0.39	0.22	4	1.80	0.144
Student	***READ 180***	**-2.04**	**1.17**	**374**	**-1.75**	**0.081**
	Gender	-1.80	1.12	374	-1.61	0.108
	ITBS Reading Total 08	0.45	0.05	374	9.89	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	0.04	0.001			
Student	Residual	118.65				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-37: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on Spring 2009 ITBS Comprehension Scores of Sixth-Graders in Year 3

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	179.65	1.03	7	173.61	0.000
Student	***READ 180***	**-1.41**	**1.40**	**407**	**-1.01**	**0.314**
	English Language Learner	-9.51	6.86	407	-1.39	0.166
	African American	-8.47	6.38	407	-1.33	0.185
	ITBS Comprehension 08	0.38	0.05	407	8.27	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	0.02	0.000			
Student	Residual	198.43				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-38: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on Spring 2009 ITBS Vocabulary Scores of Sixth-Graders in Year 3

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	188.92	1.15	4	164.16	0.000
	Percent Female	1.34	0.55	4	2.41	0.07
	Percent English Language Learners	0.51	0.27	4	1.89	0.129
Student	***READ 180***	**-2.34**	**1.46**	**375**	**-1.60**	**0.111**
	Gender	-3.80	1.41	375	-2.70	0.008
	ITBS Vocab 08	0.35	0.05	375	7.61	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	0.02	0.003			
Student	Residual	186.46				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-39: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on Spring 2009 TCAP Reading Scores of Sixth-Graders in Year 3

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	473.76	3.85	6	122.94	0.000
	School Size	0.02	0.02	6	1.45	0.197
Student	***READ 180***	**6.95**	**3.20**	**479**	**2.17**	**0.030**
	Gender	5.62	3.02	479	1.86	0.063
	African American	-23.07	6.94	479	-3.32	0.001
	TCAP Reading 08	0.55	0.06	479	8.91	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	66.44	0.053			
Student	Residual	1086.14				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-40: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on Spring 2009 TCAP Math Scores of Sixth-Graders in Year 3

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	491.72	2.36	5	208.54	0.000
	Percent African American	4.69	2.05	5	2.28	0.070
	Percent English Language Learners	6.75	2.94	5	2.29	0.069
Student	***READ 180***	**-3.21**	**2.58**	**480**	**-1.24**	**0.215**
	TCAP Math 08	0.53	0.05	480	11.02	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	10.83	0.016			
Student	Residual	717.76				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-41: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on Spring 2009 TCAP Science Scores of Sixth-Graders in Year 3

Level	Effect	Estimate	St Err	DF	t-value	Pr > |t|
School	Intercept	183.31	1.36	5	134.33	0.000
	Percent African American	2.18	1.23	5	1.77	0.136
	Percent English Language Learners	3.43	1.76	5	1.94	0.108
Student	***READ 180***	**-0.87**	**1.45**	**474**	**-0.60**	**0.550**
	Gender	-4.41	1.38	474	-3.20	0.002
	English Language Learner	-9.96	6.32	474	-1.58	0.12
	African American	-10.48	5.78	474	-1.81	0.07
	Free/Reduced Lunch	-7.74	3.31	474	-2.34	0.02
	TCAP Science 08	0.26	0.04	474	5.94	0.00
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	4.26	0.042			
Student	Residual	224.79				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-42: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on Spring 2009 TCAP Social Studies Scores of Sixth-Graders in Year 3

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	183.64	1.24	5	147.61	0.000
	Percent African American	-0.41	0.16	5	-2.48	0.055
	Percent Free/Reduced Lunch	-0.57	0.35	5	-1.60	0.169
Student	***READ 180***	**-0.58**	**1.58**	**476**	**-0.37**	**0.714**
	TCAP Social Studies 08	0.37	0.06	476	6.10	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	0.02	0.009			
Student	Residual	271.45				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-43: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on ITBS Total Reading Scores of Sixth-Graders in Year 4

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	18.83	0.77	5	24.59	0.000
	Percent Female	0.80	0.43	5	1.86	0.121
	Percent ELL	0.53	0.20	5	2.66	0.044
Student	***READ 180***	**0.51**	**1.03**	**376**	**0.49**	**0.621**
	African American	6.26	2.37	376	2.64	0.009
	ITBS Total Reading Pre	0.39	0.05	376	8.25	0.000
Random Effects						
Level	**Variance Components**	**Variance**				
School	School intercepts	0.14				
Student	Residual	93.85				
Random Effects (From Unconditional Model)						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	0.29	0.002			
Student	Residual	116.59				

** Final model includes the treatment effect of* READ 180 *and all covariates with p<0.2.*
† The interclass correlation coefficient was calculated using a (unconditional) model with no covariates.
Note: Due to missing pretest data in the final model, the sample sizes for the final and unconditional models differ.

Table G-44: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on ITBS Comprehension Scores of Sixth-Graders in Year 4

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	21.07	0.86	3	24.39	0.000
	Percent African American	1.10	0.67	3	1.64	0.198
	Percent Female	0.94	0.50	3	1.87	0.154
	Percent ELL	1.61	0.98	3	1.65	0.195
	Size	0.01	0.00	3	2.24	0.100
Student	***READ 180***	**1.95**	**1.14**	**374**	**1.70**	**0.089**
	Gender	1.52	1.10	374	1.38	0.169
	ELL	9.90	4.49	374	2.21	0.028
	African American	11.54	4.72	374	2.45	0.015
	ITBS Comprehension Pre	0.36	0.05	374	7.04	0.000
Random Effects						
Level	**Variance Components**	**Variance**				
School	School intercepts	0.03				
Student	Residual	114.75				
Random Effects (From Unconditional Model)						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	0.03	0.000			
Student	Residual	133.86				

** Final model includes the treatment effect of* READ 180 *and all covariates with p<0.2.*
† The interclass correlation coefficient was calculated using a (unconditional) model with no covariates.
Note: Due to missing pretest data in the final model, the sample sizes for the final and unconditional models differ.

Table G-45: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on ITBS Vocabulary Scores of Sixth-Graders in Year 4

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	21.06	0.76	3	27.56	0.000
	Percent Female	0.97	0.48	3	2.03	0.127
	Percent SPED	0.82	0.44	3	1.87	0.153
	Percent ELL	1.04	0.32	3	3.29	0.071
	Percent FRL	-0.94	0.49	3	-1.92	0.145
Student	***READ 180***	**-0.58**	**1.05**	**374**	**-0.55**	**0.583**
	Gender	-2.52	1.02	374	-2.48	0.014
	African American	7.27	2.40	374	3.03	0.003
	ITBS Vocabulary Pre	0.30	0.04	374	7.08	0.000
Random Effects						
Level	**Variance Components**	**Variance**				
School	School intercepts	0.02				
Student	Residual	96.38				
Random Effects (From Unconditional Model)						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	3.32	0.028			
Student	Residual	117.08				

** Final model includes the treatment effect of* READ 180 *and all covariates with p<0.2.*
† The interclass correlation coefficient was calculated using a (unconditional) model with no covariates.
Note: Due to missing pretest data in the final model, the sample sizes for the final and unconditional models differ.

Table G-46: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on ITBS Total Reading Scores of Sixth-Graders in Years 1–4

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	19.37	0.33	5	59.14	0.000
	Percent Female	0.52	0.19	5	2.81	0.038
	Percent ELL	0.36	0.09	5	3.93	0.016
Student	***READ 180***	**-0.29**	**0.46**	**1710**	**-0.63**	**0.530**
	ELL	-2.73	1.04	1710	-2.63	0.009
	ITBS Total Reading Pre	0.44	0.02	1710	20.17	0.000
Random Effects						
Level	**Variance Components**	**Variance**				
School	School intercepts	0.02				
Student	Residual	87.83				
Random Effects (From Unconditional Model)						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	0.64	0.006			
Student	Residual	109.87				

** Final model includes the treatment effect of* READ 180 *and all covariates with p<0.2.*
† The interclass correlation coefficient was calculated using a (unconditional) model with no covariates.
Note: Due to missing pretest data in the final model, the sample sizes for the final and unconditional models differ.

Table G-47: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on ITBS Comprehension Scores of Sixth-Graders in Years 1–4

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	22.13	0.37	5	60.00	0.000
	Percent Female	0.28	0.16	5	1.69	0.152
	Size	0.00	0.00	5	2.10	0.088
Student	***READ 180***	**-0.12**	**0.51**	**1750**	**-0.24**	**0.814**
	Gender	1.77	0.49	1750	3.61	0.001
	ITBS Comprehension Pre	0.37	0.02	1750	16.12	0.000
Random Effects						
Level	**Variance Components**	**Variance**				
School	School intercepts	0.02				
Student	Residual	105.24				
Random Effects (From Unconditional Model)						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	0.29	0.002			
Student	Residual	120.81				

** Final model includes the treatment effect of* READ 180 *and all covariates with p<0.2.*
† The interclass correlation coefficient was calculated using a (unconditional) model with no covariates.
Note: Due to missing pretest data in the final model, the sample sizes for the final and unconditional models differ.

Table G-48: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on ITBS Vocabulary Scores of Sixth-Graders in Years 1–4

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	21.00	0.35	5	60.57	0.000
	Percent Female	0.56	0.19	5	2.90	0.035
	Percent ELL	0.47	0.10	5	4.90	0.003
State	***READ 180***	**0.02**	**0.50**	**1726**	**0.03**	**0.975**
	Gender	-1.92	0.49	1726	-3.95	0.000
	ELL	-3.44	1.10	1726	-3.11	0.002
	ITBS Vocabulary Pre	0.35	0.02	1726	16.85	0.000
Random Effects						
Level	**Variance Components**	**Variance**				
School	School intercepts	0.01				
Student	Residual	101.02				
Random Effects (From Unconditional Model)						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	1.29	0.011			
Student	Residual	120.20				

** Final model includes the treatment effect of* READ 180 *and all covariates with p<0.2.*
† The interclass correlation coefficient was calculated using a (unconditional) model with no covariates.
Note: Due to missing pretest data in the final model, the sample sizes for the final and unconditional models differ.

Table G-49: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on ITBS Total Reading Scores of Sixth-Graders in Years 1–4 and Seventh- and Eighth-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	20.11	0.36	5	55.23	0.000
	Percent Female	0.49	0.25	5	1.95	0.108
	Percent ELL	0.33	0.12	5	2.82	0.038
State	***READ 180***	**-0.40**	**0.41**	**2467**	**-0.99**	**0.322**
	FRL	-0.98	0.73	2467	-1.35	0.177
	ELL	-2.02	0.87	2467	-2.32	0.021
	ITBS Total Reading Pre	0.41	0.02	2467	22.32	0.000
Random Effects						
Level	**Variance Components**	**Variance**				
School	School intercepts	0.41				
Student	Residual	95.02				
Random Effects (From Unconditional Model)						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	1.02	0.009			
Student	Residual	114.65				

** Final model includes the treatment effect of* READ 180 *and all covariates with p<0.2.*
† The interclass correlation coefficient was calculated using a (unconditional) model with no covariates.
Note: Due to missing pretest data in the final model, the sample sizes for the final and unconditional models differ.

Table G-50: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on ITBS Comprehension Scores of Sixth-Graders in Years 1–4 and Seventh- and Eighth-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	22.62	0.41	6	55.06	0.000
	Size	0.00	0.00	6	1.51	0.181
State	***READ 180***	**-0.12**	**0.44**	**2518**	**-0.27**	**0.790**
	Gender	1.78	0.42	2518	4.27	0.000
	FRL	-1.01	0.77	2518	-1.30	0.193
	ITBS Comprehension Pre	0.34	0.02	2518	18.02	0.000
Random Effects						
Level	**Variance Components**	**Variance**				
School	School intercepts	0.59				
Student	Residual	109.00				
Random Effects (From Unconditional Model)						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	0.68	0.006			
Student	Residual	122.32				

** Final model includes the treatment effect of* READ 180 *and all covariates with p<0.2.*
† The interclass correlation coefficient was calculated using a (unconditional) model with no covariates.
Note: Due to missing pretest data in the final model, the sample sizes for the final and unconditional models differ.

Table G-51: Final Model* for Estimating Fixed and Random Effects for Determining the One-Year Impact of *READ 180* on ITBS Vocabulary Scores of Sixth-Graders in Years 1–4 and Seventh- and Eighth-Graders in Year 1

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	21.84	0.30	5	71.96	0.000
	Percent Female	0.39	0.17	5	2.25	0.073
	Percent ELL	0.39	0.09	5	4.54	0.006
State	***READ 180***	**-0.24**	**0.44**	**2501**	**-0.54**	**0.590**
	Gender	-1.81	0.43	2501	-4.16	0.000
	African American	2.63	0.94	2501	2.79	0.006
	ITBS Vocabulary Pre	0.33	0.02	2501	18.89	0.000
Random Effects						
Level	**Variance Components**	**Variance**				
School	School intercepts	0.00				
Student	Residual	116.71				
Random Effects (From Unconditional Model)						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	1.25	0.009			
Student	Residual	134.47				

** Final model includes the treatment effect of* READ 180 *and all covariates with p<0.2.*
† The interclass correlation coefficient was calculated using a (unconditional) model with no covariates.
Note: Due to missing pretest data in the final model, the sample sizes for the final and unconditional models differ.

Table F-52: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 ITBS Total Reading Scores of Seventh- and Eighth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	198.05	0.56	5	221.71	0.000
	Percent Female	0.76	0.45	5	1.70	0.149
	Percent FRL	-0.76	0.32	5	-2.37	0.062
Student	Grade 8 in Year 2	4.23	1.26	652	3.35	0.001
	READ 180	**0.05**	**1.28**	**652**	**0.04**	**0.967**
	ITBS Total Reading 06	0.49	0.04	652	11.66	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	1.03	0.016			
Student	Level 1	247.36				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*
† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-53: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 ITBS Comprehension Scores of Seventh- and Eighth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	193.66	1.00	5	192.81	0.000
	Percent African American	-0.44	0.21	5	-2.15	0.083
	Percent Female	2.01	0.59	5	3.41	0.024
Student	Grade 8 in Year 2	2.83	1.54	658	1.84	0.065
	READ 180	**-0.74**	**1.58**	**658**	**-0.47**	**0.639**
	Gender	2.89	1.53	658	1.89	0.059
	ITBS Comprehension 06	0.39	0.04	658	8.62	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.08	0.014			
Student	Level 1	385.10				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-54: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 ITBS Vocabulary Scores of Seventh- and Eighth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	201.47	1.05	6	190.28	0.000
	Percent FRL	-1.18	0.37	6	-3.22	0.021
Student	Grade 8 in Year 2	7.47	1.66	666	4.49	0.000
	READ 180	**1.79**	**1.65**	**666**	**1.08**	**0.280**
	ELL	-8.72	6.01	666	-1.45	0.147
	ITBS Vocabulary 06	0.31	0.04	666	7.40	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.25	0.012			
Student	Level 1	428.05				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-55: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 TCAP Reading/LA Scores of Seventh- and Eighth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	505.29	1.15	3	437.57	0.000
	Percent African American	-1.33	0.34	3	-3.92	0.059
	Percent Female	2.17	0.71	3	3.05	0.068
	Percent SPED	2.28	0.73	3	3.11	0.069
	Percent FRL	-2.66	0.81	3	-3.29	0.071
Student	Grade 8 in Year 2	16.48	1.76	804	9.35	0.000
	READ 180	**1.38**	**1.81**	**804**	**0.76**	**0.446**
	Gender	3.51	1.76	804	2.00	0.045
	ELL	-9.94	3.58	804	-2.78	0.006
	TCAP Reading 06	0.25	0.04	804	7.02	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.10	0.021			
Student	Level 1	617.56				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-56: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 TCAP Mathematics Scores of Seventh- and Eighth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	511.88	3.02	7	169.52	0.000
Student	Grade 8 in Year 2	4.43	2.09	808	2.12	0.034
	READ 180	**-0.35**	**2.16**	**808**	**-0.16**	**0.871**
	Gender	4.26	2.08	808	2.04	0.041
	TCAP Math 06	0.57	0.04	808	15.60	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	57.32	0.060			
Student	Level 1	861.99				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-57: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 TCAP Science Scores of Seventh- and Eighth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	184.39	0.74	4	250.68	0.000
	Percent Female	1.63	0.46	4	3.53	0.036
	Percent SPED	0.37	0.23	4	1.58	0.188
	Percent ELL	0.44	0.27	4	1.62	0.179
Student	Grade 8 in Year 2	-2.82	1.12	780	-2.52	0.012
	READ 180	**0.32**	**1.14**	**780**	**0.28**	**0.782**
	Gender	-1.73	1.11	780	-1.55	0.121
	African American	-6.39	4.06	780	1.58	0.115
	ELL	-6.37	4.24	780	-1.50	0.133
	TCAP Science 06	0.32	0.03	780	9.17	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.06	0.027			
Student	Level 1	240.01				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-58: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 TCAP Social Studies Scores of Seventh- and Eighth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	186.53	0.60	3	310.21	0.000
	Percent African American	-1.27	0.57	3	-2.22	0.103
	Percent ELL	-1.76	0.77	3	-2.27	0.097
	Percent FRL	-0.79	0.20	3	-4.01	0.054
	Enrollment	-0.01	0.003	3	-2.62	0.072
Student	***READ 180***	**-1.37**	**0.90**	**776**	**-1.52**	**0.129**
	African American	-4.59	1.90	776	-2.41	0.016
	TCAP Social Studies 06	0.14	0.02	776	5.82	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.07	0.035			
Student	Level 1	145.89				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-59: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 ITBS Total Reading Scores of Seventh-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	193.29	1.03	6	187.70	0.000
	Percent FRL	-0.83	0.36	6	-2.29	0.061
Student	***READ 180***	**1.99**	**1.64**	**330**	**1.22**	**0.226**
	Gender	3.08	1.59	330	1.94	0.053
	African American	-8.95	6.06	330	1.94	0.053
	ELL	-14.38	6.52	330	-2.21	0.028
	ITBS Total Reading 06	0.57	0.06	330	9.29	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.10	0.006			
Student	Level 1	205.86				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-60: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 ITBS Comprehension Scores of Seventh-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	190.50	1.30	4	146.71	0.000
	Percent SPED	1.36	0.78	4	1.74	0.155
	Percent ELL	0.85	0.47	4	1.83	0.140
	Percent FRL	-2.01	0.84	4	-2.39	0.072
Student	***READ 180***	**-0.03**	**2.05**	**329**	**-0.02**	**0.988**
	Gender	4.02	1.98	329	2.04	0.042
	African American	-36.67	18.01	329	-2.04	0.042
	Hispanic	-28.03	19.72	329	-1.42	0.156
	FRL	-5.95	3.09	329	-1.93	0.055
	ELL	-13.01	8.65	329	1.50	0.133
	ITBS Comprehension 06	0.51	0.07	329	7.81	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.15	0.010			
Student	Level 1	318.09				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-61: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 ITBS Vocabulary Scores of Seventh-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	195.20	1.37	6	142.15	0.000
	Percent FRL	-0.94	0.48	6	-1.93	0.101
Student	***READ 180***	**4.39**	**2.19**	**339**	**2.00**	**0.045**
	Hispanic	12.52	9.02	339	1.39	0.166
	ELL	-20.67	9.37	339	-2.21	0.028
	ITBS Vocabulary 06	0.35	0.06	339	5.82	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.08	0.007			
Student	Level 1	380.32				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*
† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-62: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 TCAP Reading/LA Scores of Seventh-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	497.21	1.80	6	276.54	0.000
	Percent FRL	-1.48	0.63	6	-2.35	0.056
Student	***READ 180***	**1.39**	**2.87**	**409**	**0.48**	**0.629**
	Gender	6.11	2.79	409	2.19	0.029
	African American	-14.32	10.83	409	-1.32	0.187
	ELL	-28.22	11.63	409	-2.43	0.016
	TCAP Reading 06	0.28	0.06	409	4.56	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.50	0.012			
Student	Level 1	787.39				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*
† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-63: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 TCAP Mathematics Scores of Seventh-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	507.80	5.09	7	99.76	0.000
Student	***READ 180***	**-0.80**	**2.98**	**412**	**-0.27**	**0.788**
	Gender	4.38	2.87	412	1.53	0.128
	TCAP Math 06	0.64	0.05	412	11.69	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	177.62	0.137			
Student	Level 1	824.04				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*
† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-64: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 TCAP Science Scores of Seventh-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	186.95	1.05	5	178.08	0.000
	Percent SPED	1.29	0.41	5	3.13	0.030
	Percent FRL	-1.43	0.55	5	-2.63	0.046
Student	***READ 180***	**-0.72**	**1.54**	**396**	**-0.47**	**0.639**
	Gender	-2.71	1.50	396	-1.80	0.072
	African American	-9.40	5.87	396	-1.60	0.109
	FRL	-3.75	2.46	396	-1.52	0.128
	ELL	-9.88	6.43	396	-1.54	0.125
	TCAP Science 06	0.30	0.05	396	5.72	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.99	0.039			
Student	Level 1	221.21				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*
† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-65: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 TCAP Social Studies Scores of Seventh-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	186.51	1.13	5	165.63	0.000
	Percent ELL	-0.49	0.31	5	-1.61	0.169
	Percent FRL	-0.82	0.43	5	-1.88	0.118
Student	***READ 180***	**-1.10**	**1.20**	**399**	**-0.92**	**0.361**
	African American	-5.93	2.97	399	-1.99	0.046
	TCAP Social Studies 06	0.14	0.03	399	4.421	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	5.11	0.054			
Student	Level 1	134.74				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-66: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 ITBS Total Reading Scores of Eighth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	202.88	1.78	7	114.79	0.000
Student	***READ 180***	**-2.20**	**1.95**	**317**	**-1.13**	**0.260**
	Hispanic	5.59	3.52	317	1.59	0.114
	ITBS Total Reading 06	0.43	0.06	317	7.38	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	12.57	0.044			
Student	Level 1	278.72				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-67: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 ITBS Comprehension Scores of Eighth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	197.13	1.51	6	130.66	0.000
	Percent Female	1.97	0.72	6	2.73	0.035
Student	***READ 180***	**-2.73**	**2.39**	**321**	**-1.14**	**0.256**
	ITBS Comprehension 06	0.32	0.06	321	5.18	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.05	0.012			
Student	Level 1	442.60				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-68: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 ITBS Vocabulary Scores of Eighth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	208.07	2.64	7	78.89	0.000
Student	***READ 180***	**-1.44**	**2.44**	**324**	**-0.59**	**0.555**
	African American	-13.18	4.43	324	-2.98	0.004
	ITBS Vocabulary 06	0.28	0.05	324	4.97	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	35.92	0.061			
Student	Level 1	444.24				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-69: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 TCAP Reading/LA Scores of Eighth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	514.23	1.43	3	360.57	0.000
	Percent African American	-1.34	0.42	3	-3.18	0.069
	Percent Female	2.52	0.90	3	2.80	0.067
	Percent SPED	2.62	0.90	3	2.93	0.067
	Percent FRL	-2.61	0.99	3	-2.64	0.071
Student	***READ 180***	**1.17**	**2.18**	**389**	**0.537**	**0.591**
	FRL	4.18	3.24	389	1.288	0.199
	ELL	-5.84	3.98	389	-1.466	0.143
	TCAP Reading 06	0.23	0.04	389	5.656	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.60	0.052			
Student	Level 1	443.87				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-70: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 TCAP Mathematics Scores of Eighth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	516.79	2.42	7	213.31	0.000
Student	***READ 180***	**-0.13**	**3.03**	**391**	**-0.04**	**0.966**
	Gender	5.07	2.94	391	1.72	0.085
	African American	49.51	29.19	391	1.70	0.090
	Hispanic	45.47	29.53	391	1.54	0.124
	TCAP Math 06	0.52	0.05	391	11.05	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	16.95	0.020			
Student	Level 1	840.77				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-71: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 TCAP Science Scores of Eighth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	181.81	1.36	5	134.01	0.000
	Percent African American	-0.71	0.31	5	-2.30	0.068
	Percent Female	2.77	0.94	5	2.96	0.034
Student	***READ 180***	**1.62**	**1.66**	**380**	**0.98**	**0.331**
	TCAP Science 06	0.33	0.05	380	7.32	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	5.57	0.062			
Student	Level 1	246.28				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-72: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on 2008 TCAP Social Studies Scores of Eighth-Graders in Year 2

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	186.60	0.89	3	210.37	0.000
	Percent African American	-0.51	0.24	3	-2.10	0.118
	Percent Female	1.00	0.54	3	1.85	0.156
	Percent FRL	-0.78	0.30	3	-2.64	0.071
	Enrollment	-0.01	0.004	3	-1.88	0.151
Student	***READ 180***	**-1.52**	**1.35**	**372**	**-1.13**	**0.259**
	TCAP Social Studies 06	0.14	0.03	372	4.23	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	Level 2	0.08	0.029			
Student	Level 1	157.04				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-73: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on Spring 2009 ITBS Reading Total Scores of Seventh-Graders in Year 3

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	194.87	1.05	6	185.57	0.000
	Percent African American	-0.53	0.16	6	-3.32	0.019
Student	***READ 180***	**-0.18**	**1.61**	**346**	**-0.11**	**0.910**
	Gender	2.54	1.55	346	1.64	0.103
	Free/Reduced Lunch	6.35	3.52	346	1.80	0.072
	ITBS Reading Total 07	0.56	0.06	346	8.88	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	0.04	0.017			
Student	Residual	208.53				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-74: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on Spring 2009 ITBS Comprehension Scores of Seventh-Graders in Year 3

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	190.98	1.37	6	139.01	0.000
	Percent English Language Learners	0.59	0.30	6	1.99	0.093
Student	***READ 180***	**-2.35**	**2.11**	**347**	**-1.12**	**0.266**
	Gender	4.39	2.04	347	2.16	0.032
	Free/Reduced Lunch	7.37	4.65	347	1.59	0.113
	ITBS Comprehension 07	0.51	0.07	347	7.62	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	0.05	0.026			
Student	Residual	362.75				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-75: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on Spring 2009 ITBS Vocab Scores of Seventh-Graders in Year 3

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	198.57	1.20	5	164.87	0.000
	Percent African American	-3.17	1.05	5	-3.03	0.032
	Percent English Language Learners	-3.72	1.46	5	-2.54	0.051
Student	***READ 180***	**1.27**	**1.83**	**370**	**0.70**	**0.487**
	Free/Reduced Lunch	6.62	4.01	370	1.65	0.099
	ITBS Vocab 07	0.36	0.05	370	6.63	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	0.04	0.026			
Student	Residual	286.76				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-76: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on Spring 2009 TCAP Reading Scores of Seventh-Graders in Year 3

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	496.96	2.02	7	246.05	0.000
Student	***READ 180***	**-1.19**	**2.47**	**571**	**-0.48**	**0.629**
	Gender	3.90	2.40	571	1.63	0.104
	TCAP Reading 07	0.47	0.05	571	9.16	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	11.65	0.008			
Student	Residual	806.63				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-77: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on Spring 2009 TCAP Math Scores of Seventh-Graders in Year 3

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	508.17	3.48	6	146.14	0.000
	Percent Free/Reduced Lunch	-2.23	1.41	6	-1.59	0.163
Student	***READ 180***	**-2.66**	**2.46**	**568**	**-1.08**	**0.281**
	Gender	3.10	2.35	568	1.32	0.189
	Free/Reduced Lunch	8.52	5.06	568	1.68	0.092
	English Language Learner	-8.60	6.11	568	-1.41	0.160
	TCAP Math 07	0.63	0.05	568	13.06	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	74.66	0.052			
Student	Residual	783.80				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-78: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on Spring 2009 TCAP Science Scores of Seventh-Graders in Year 3

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	185.18	1.59	7	116.23	0.000
Student	***READ 180***	**-2.21**	**1.53**	**562**	**-1.44**	**0.149**
	English Language Learner	-10.50	7.32	562	-1.44	0.152
	African American	-11.24	6.77	562	-1.66	0.097
	TCAP Science 07	0.32	0.04	562	7.13	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	11.95	0.022			
Student	Residual	302.99				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-79: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on Spring 2009 TCAP Social Studies Scores of Seventh-Graders in Year 3

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	186.81	1.67	7	111.54	0.000
Student	***READ 180***	**-1.26**	**0.99**	**559**	**-1.28**	**0.202**
	Gender	-1.88	0.94	559	-1.99	0.047
	Free/Reduced Lunch	3.25	2.03	559	1.60	0.109
	TCAP Social Studies 07	0.42	0.04	559	11.44	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	18.92	0.094			
Student	Residual	122.65				

** Final model includes the treatment effect of* READ 180 *and all covariates with p < 0.2.*
† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table G-80: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on ITBS Total Reading Scores of Seventh-Graders in Year 4

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	20.35	1.11	3	18.33	0.000
	Percent African American	2.96	0.77	3	3.86	0.061
	Percent Gender	1.72	0.53	3	3.22	0.070
	Percent ELL	4.13	1.12	3	3.70	0.067
	Size	0.01	0.00	3	2.43	0.083
Student	***READ 180***	**1.20**	**1.32**	**254**	**0.91**	**0.364**
	Gender	2.10	1.27	254	1.65	0.100
	African American	-5.25	2.75	254	-1.91	0.057
	ITBS Total Reading Pre	0.51	0.07	254	7.59	0.000
Random Effects						
Level	**Variance Components**	**Variance**				
School	School intercepts	0.04				
Student	Residual	104.12				
Random Effects (From Unconditional Model)						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	3.78	0.029			
Student	Residual	127.14				

** Final model includes the treatment effect of* READ 180 *and all covariates with p<0.2.*
† The interclass correlation coefficient was calculated using a (unconditional) model with no covariates.
Note: Due to missing pretest data in the final model, the sample sizes for the final and unconditional models differ.

Table G-81: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on ITBS Comprehension Scores of Seventh-Graders in Year 4

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	22.97	1.26	7	18.29	0.000
Student	***READ 180***	**2.39**	**1.29**	**271**	**1.86**	**0.064**
	Gender	1.98	1.27	271	1.56	0.120
	FRL	-3.62	2.52	271	-1.43	0.153
	African American	-4.12	2.66	271	-1.55	0.123
	ITBS Comprehension Pre	0.32	0.06	271	5.17	0.000
Random Effects						
Level	**Variance Components**	**Variance**				
School	School intercepts	4.56				
Student	Residual	106.95				
Random Effects (From Unconditional Model)						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	3.66	0.030			
Student	Residual	118.52				

** Final model includes the treatment effect of* READ 180 *and all covariates with p<0.2.*
† The interclass correlation coefficient was calculated using a (unconditional) model with no covariates.
Note: Due to missing pretest data in the final model, the sample sizes for the final and unconditional models differ.

Table G-82: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of READ 180 on ITBS Vocabulary Scores of Seventh-Graders in Year 4

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	22.13	1.41	4	15.71	0.000
	Percent African American	2.19	1.18	4	1.86	0.135
	Percent Female	1.83	0.82	4	2.24	0.085
	Percent ELL	3.68	1.75	4	2.10	0.101
Student	***READ 180***	**0.00**	**1.59**	**259**	**0.00**	**0.999**
	ITBS Vocabulary Pre	0.44	0.07	259	6.11	0.000
Random Effects						
Level	**Variance Components**	**Variance**				
School	School intercepts	2.45				
Student	Residual	155.43				
Random Effects (From Unconditional Model)						
Level	**Variance Components**	**Variance**	**ICC†**			
School	School intercepts	1.33	0.007			
Student	Residual	177.04				

** Final model includes the treatment effect of* READ 180 *and all covariates with p<0.2.*
† The interclass correlation coefficient was calculated using a (unconditional) model with no covariates.
Note: Due to missing pretest data in the final model, the sample sizes for the final and unconditional models differ.

Table G-83: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on ITBS Comprehension Scores of Seventh- and Eighth-Graders in Year 2 and Seventh-Graders in Years 3 and 4

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	24.53	0.43	5	56.84	0.000
	Percent Female	0.88	0.25	5	3.44	0.024
	Percent ELL	0.36	0.12	5	2.90	0.035
Student	***READ 180***	**-0.10**	**0.63**	**1289**	**-0.15**	**0.878**
	Gender	2.00	0.62	1289	3.25	0.002
	ITBS Comprehension Pre	0.32	0.03	1289	11.36	0.000
Random Effects						
Level	**Variance Components**	**Variance**				
School	School intercepts	0.05				
Student	Residual	122.37				
Random Effects (From Unconditional Model)						
Level	**Variance Components**	**Variance**	**ICC****			
School	School intercepts	1.22	0.009			
Student	Residual	135.26				

** Final model includes the treatment effect of* READ 180 *and all covariates with p<0.2.*
† The interclass correlation coefficient was calculated using a (unconditional) model with no covariates.
Note: Due to missing pretest data in the final model, the sample sizes for the final and unconditional models differ.

Table G-84: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on ITBS Total Reading Scores of Seventh- and Eighth-Graders in Year 2 and Seventh-Graders in Years 3 and 4

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	21.75	0.43	5	50.35	0.000
	Percent Female	0.91	0.26	5	3.50	0.023
	Percent ELL	0.42	0.13	5	3.30	0.026
Student	***READ 180***	**0.18**	**0.61**	**1267**	**0.29**	**0.769**
	Gender	1.65	0.60	1267	2.76	0.006
	ITBS Total Reading Pre	0.43	0.03	1267	15.32	0.000
Random Effects						
Level	**Variance Components**	**Variance**				
School	School intercepts	0.13				
Student	Residual	113.07				
Random Effects (From Unconditional Model)						
Level	**Variance Components**	**Variance**	**ICC****			
School	School intercepts	1.20	0.009			
Student	Residual	133.25				

** Final model includes the treatment effect of* READ 180 *and all covariates with p<0.2.*
† The interclass correlation coefficient was calculated using a (unconditional) model with no covariates.
Note: Due to missing pretest data in the final model, the sample sizes for the final and unconditional models differ.

Table G-85: Final Model* for Estimating Fixed and Random Effects for Determining the Two-Year Impact of *READ 180* on ITBS Vocabulary Scores of Seventh- and Eighth-Graders in Year 2 and Seventh-Graders in Years 3 and 4

Fixed Effects						
Level	**Effect**	**Estimate**	**St Err**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	22.47	0.46	6	48.84	0.000
	FRL	-0.44	0.16	6	-2.80	0.032
State	***READ 180***	**0.73**	**0.69**	**1309**	**1.05**	**0.294**
	African American	-3.17	1.44	1309	-2.20	0.028
	ITBS Vocabulary Pre	0.32	0.03	1309	11.44	0.000
Random Effects						
Level	**Variance Components**	**Variance**				
School	School intercepts	0.02				
Student	Residual	153.61				
Random Effects (From Unconditional Model)						
Level	**Variance Components**	**Variance**	**ICC****			
School	School intercepts	0.99	0.006			
Student	Residual	168.70				

** Final model includes the treatment effect of* READ 180 *and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a (unconditional) model with no covariates.

Note: Due to missing pretest data in the final model, the sample sizes for the final and unconditional models differ.

Appendix H
Tests of Differential Attrition in the *READ 180* Impact ITT Student Samples

Table H-1: Tests of Differential Attrition in the *READ 180* Impact Student Sample

Dependent Variable	Number of Students with Pretest Scores		Attrition—Number (%) without Posttest Scores		Attrition Effect *		Significance Level of Differential Attrition Effect †	Group Potentially Favored by Differential Attrition
	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group		
ITBS Total Reading	656	940	145 (22%)	228 (24%)	0.1	-0.3	0.429	Treatment
TCAP Reading/LA	698	1042	34 (5%)	70 (7%)	0.2	-0.1	0.211	Treatment
TCAP Mathematics	697	1040	36 (5%)	69 (7%)	0.6	0.4	0.369	Treatment
TCAP Science	686	1006	43 (6%)	91 (9%)	-0.1	0.3	0.164	Control
TCAP Social Studies	685	1007	41 (6%)	101 (10%)	0.1	0.6	0.195	Control

**Attrition Effect = Mean pretest score of students with a posttest score minus mean pretest score of all students (how much higher/lower the mean pretest score was as a result of the attrition)*

† Differential Attrition Effect = Difference between treatment and control group attrition effects

Appendix I: Complete Results of Multi-Level Analyses of READ 180 Impact on Student Achievement in MCLA Treatment and Control Schools in Year 1

Table I-1 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 ITBS Total Reading Scores—Year 1, All Grades

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	191.33	1.01	3	189.99	0.000
	MCLA	2.03	1.49	3	1.36	0.267
	Percent African American	1.23	0.61	3	2.01	0.130
	Percent ELL	2.28	0.95	3	2.39	0.086
	Percent FRL	-0.49	0.20	3	-2.45	0.081
Student	Grade 7	5.66	0.94	1212	6.01	0.000
	Grade 8	12.32	1.07	1212	11.49	0.000
	READ 180	-0.75	1.13	1212	-0.67	0.505
	***READ 180**MCLA**	**1.04**	**1.62**	**1212**	**0.65**	**0.518**
	ELL	-3.65	1.66	1212	-2.19	0.028
	ITBS Total Reading 06	0.43	0.03	1212	16.03	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	0.04	0.005			
Student	Level 1	185.30				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-2 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 ITBS Comprehension Scores—Year 1, All Grades

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	185.75	1.26	3	147.25	0.000
	MCLA	2.66	1.87	3	1.42	0.249
	Percent African American	1.83	0.76	3	2.39	0.086
	Percent ELL	3.07	1.19	3	2.59	0.073
	Percent FRL	-1.01	0.25	3	-4.12	0.048
Student	Grade 7	7.11	1.15	1222	6.16	0.000
	Grade 8	11.11	1.28	1222	8.71	0.000
	READ 180	-1.46	1.41	1222	-1.03	0.303
	***READ 180**MCLA**	**2.79**	**2.03**	**1222**	**1.38**	**0.168**
	Gender	3.78	0.99	1222	3.83	0.000
	Hispanic	5.53	3.80	1222	1.45	0.146
	ELL	-7.97	3.86	1222	-2.07	0.039
	ITBS Comprehension 06	0.37	0.03	1222	12.96	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	0.04	0.008			
Student	Level 1	293.89				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-3 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 ITBS Vocabulary Scores—Year 1, All Grades

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	197.25	1.12	5	175.86	0.000
	MCLA	0.40	1.54	5	0.26	0.808
	Percent ELL	0.50	0.19	5	2.59	0.048
Student	Grade 7	5.26	1.22	1235	4.32	0.000
	Grade 8	15.96	1.36	1235	11.73	0.000
	READ 180	0.42	1.44	1235	0.29	0.773
	***READ 180**MCLA**	**-0.65**	**2.05**	**1235**	**-0.32**	**0.753**
	Gender	-2.13	1.01	1235	-2.10	0.036
	Hispanic	-4.70	2.10	1235	-2.24	0.025
	ITBS Vocabulary 06	0.35	0.03	1235	12.97	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	0.02	0.003			
Student	Level 1	310.83				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-4 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 TCAP Reading/LA Scores—Year 1, All Grades

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	499.02	1.49	3	335.34	0.000
	MCLA	-4.16	2.17	3	-1.92	0.145
	Percent African American	2.26	1.00	3	2.25	0.100
	Percent Female	2.78	0.54	3	5.16	0.006
	Percent ELL	3.85	1.59	3	2.42	0.083
Student	Grade 7	8.77	1.51	1622	5.81	0.000
	Grade 8	13.59	1.62	1622	8.38	0.000
	READ 180	-1.37	1.87	1622	-0.73	0.464
	***READ 180**MCLA**	**3.09**	**2.65**	**1622**	**1.17**	**0.245**
	Gender	4.00	1.29	1622	3.12	0.002
	Hispanic	8.49	4.94	1622	1.72	0.085
	FRL	-5.15	2.05	1622	-2.52	0.012
	ELL	-15.30	5.08	1622	3.01	0.003
	TCAP Reading 06	0.33	0.03	1622	12.84	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	0.07	0.012			
Student	Level 1	657.62				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-5 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 TCAP Mathematics Scores—Year 1, All Grades

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	501.94	1.75	6	287.04	0.000
	MCLA	-3.18	2.44	6	-1.30	0.241
Student	Grade 7	2.70	1.62	1621	1.66	0.096
	Grade 8	7.91	1.72	1621	4.60	0.000
	READ 180	2.48	2.00	1621	1.24	0.215
	***READ 180**MCLA**	**-5.37**	**2.83**	**1621**	**-1.90**	**0.058**
	Gender	5.39	1.38	1621	3.92	0.000
	African American	67.41	19.49	1621	3.46	0.001
	Hispanic	77.83	20.14	1621	3.86	0.000
	ELL	-7.32	5.44	1621	-1.35	0.179
	TCAP Math 06	0.51	0.02	1621	24.13	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	4.90	0.021			
Student	Level 1	753.57				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-6 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 TCAP Science Scores—Year 1, All Grades

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	185.85	0.84	5	221.43	0.000
	MCLA	-0.38	1.11	5	-0.34	0.747
	Size	-0.01	0.00	5	-2.96	0.033
Student	Grade 7	-2.41	0.86	1550	-2.80	0.006
	READ 180	0.19	1.20	1550	0.16	0.874
	***READ 180*MCLA**	**-1.44**	**1.67**	**1550**	**-0.86**	**0.388**
	ELL	-4.86	2.48	1550	-1.96	0.050
	TCAP Science 06	0.22	0.02	1550	9.39	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	0.12	0.008			
Student	Level 1	258.84				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-7 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 TCAP Social Studies Scores—Year 1, All Grades

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	185.69	1.72	6	107.93	0.000
	MCLA	-1.32	2.41	6	-0.55	0.604
Student	*READ 180*	0.81	1.19	1544	0.69	0.493
	***READ 180*MCLA**	**-0.00**	**1.67**	**1544**	**-0.00**	**0.998**
	African American	3.09	2.17	1544	1.43	0.154
	TCAP Social Studies 06	0.22	0.02	1544	9.39	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	9.10	0.034			
Student	Level 1	246.36				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-8 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 ITBS Total Reading Scores—Year 1, Sixth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	183.79	0.94	6	194.67	0.000
	MCLA	-0.03	1.33	6	-0.03	0.980
Student	*READ 180*	-0.13	1.45	458	-0.09	0.928
	***READ 180**MCLA**	**1.33**	**2.11**	**458**	**0.63**	**0.529**
	FRL	-3.02	1.65	458	-1.83	0.067
	ELL	-5.54	2.19	458	-2.53	0.012
	ITBS Total Reading 06	0.53	0.04	458	13.07	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	0.03	0.000			
Student	Level 1	119.68				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-9 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 ITBS Comprehension Scores—Year 1, Sixth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	179.36	1.20	6	149.62	0.000
	MCLA	1.86	1.69	6	1.10	0.314
Student	*READ 180*	-0.96	1.85	458	-0.52	0.605
	***READ 180**MCLA**	**0.18**	**2.68**	**458**	**0.07**	**0.947**
	Gender	4.23	1.31	458	3.23	0.002
	African American	-10.80	5.80	458	-1.86	0.063
	FRL	-3.91	2.10	458	-1.87	0.062
	ELL	-15.03	6.00	458	-2.51	0.013
	ITBS Comprehension 06	0.41	0.04	458	9.36	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	0.02	0.003			
Student	Level 1	192.95				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-10 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 ITBS Vocabulary Scores—Year 1, Sixth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	186.73	1.49	5	125.74	0.000
	MCLA	-0.03	2.08	5	-0.02	0.988
	Percent ELL	0.58	0.25	5	2.26	0.071
Student	*READ 180*	1.31	1.95	462	0.67	0.501
	***READ 180**MCLA**	**3.18**	**2.81**	**462**	**1.13**	**0.258**
	Gender	-2.40	1.38	462	-1.74	0.082
	ELL	-7.35	2.90	462	-2.53	0.012
	ITBS Vocabulary 06	0.39	0.04	462	9.84	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	0.02	0.012			
Student	Level 1	212.91				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† *The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.*

Table I-11 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 TCAP Reading/LA Scores—Year 1, Sixth Grade

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-12 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 TCAP Mathematics Scores—Year 1, Sixth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	490.07	2.50	5	196.12	0.000
	MCLA	4.27	3.49	5	1.22	0.275
	Size	0.02	0.01	5	2.63	0.046
Student	*READ 180*	5.31	3.07	592	1.73	0.084
	***READ 180**MCLA**	**-6.03**	**4.35**	**592**	**-1.39**	**0.166**
	Gender	4.42	2.10	592	2.10	0.036
	TCAP Math 06	0.53	0.04	592	13.41	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	9.11	0.018			
Student	Level 1	641.60				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-13 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 TCAP Science Scores—Year 1, Sixth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	183.13	1.82	3	100.66	0.000
	MCLA	6.76	2.97	3	2.28	0.096
	Percent Female	-1.65	0.81	3	-2.04	0.126
	Percent FRL	-0.91	0.49	3	-1.85	0.156
	Size	-0.01	0.004	3	-2.98	0.067
Student	*READ 180*	3.78	1.86	564	2.04	0.042
	***READ 180**MCLA**	**-5.41**	**2.58**	**564**	**-2.09**	**0.037**
	Gender	-1.84	1.27	564	-1.45	0.148
	TCAP Science 06	0.27	0.04	564	6.73	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	0.08	0.012			
Student	Level 1	223.68				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-14 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 TCAP Social Studies Scores—Year 1, Sixth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	184.98	2.34	6	79.18	0.000
	MCLA	2.61	3.26	6	0.80	0.455
Student	*READ 180*	2.62	2.14	565	1.22	0.221
	***READ 180**MCLA**	**-3.55**	**3.01**	**565**	**-1.18**	**0.240**
	ELL	-7.55	5.51	565	-1.37	0.171
	TCAP Social Studies 06	0.29	0.05	565	5.58	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	13.72	0.052			
Student	Level 1	293.29				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-15 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 ITBS Total Reading Scores—Year 1, Seventh Grade

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-16 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 ITBS Comprehension Scores—Year 1, Seventh Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	188.34	2.06	3	91.28	0.000
	MCLA	1.30	3.05	3	0.48	0.698
	Percent African American	2.93	1.19	3	2.47	0.080
	Percent ELL	4.08	1.78	3	2.30	0.095
	Percent FRL	-1.48	0.46	3	-3.22	0.070
Student	*READ 180*	-3.12	2.47	420	-1.26	0.208
	***READ 180**MCLA**	**2.96**	**3.53**	**420**	**0.84**	**0.404**
	Gender	2.69	1.75	420	1.54	0.123
	ITBS Comprehension 06	0.34	0.05	420	7.32	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	8.83	0.025			
Student	Level 1	345.99				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† *The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.*

Table I-17 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 ITBS Vocabulary Scores—Year 1, Seventh Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	198.84	1.61	6	123.21	0.000
	MCLA	-1.40	2.26	6	-0.62	0.559
Student	*READ 180*	-1.58	2.47	427	-0.64	0.524
	***READ 180**MCLA**	**-1.65**	**3.54**	**427**	**-0.47**	**0.642**
	ITBS Vocabulary 06	0.36	0.04	427	8.46	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	1.53	0.004			
Student	Level 1	377.19				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† *The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.*

Table I-18 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 TCAP Reading/LA Scores—Year 1, Seventh Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	497.19	1.90	5	261.90	0.000
	MCLA	0.47	2.64	5	0.18	0.867
	Percent FRL	-1.25	0.47	5	-2.67	0.044
Student	*READ 180*	-3.02	2.68	562	-1.13	0.261
	***READ 180**MCLA**	**7.79**	**3.86**	**562**	**2.02**	**0.044**
	ELL	-8.49	3.53	562	-2.41	0.017
	TCAP Reading 06	.36	0.04	562	9.58	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	7.80	0.013			
Student	Level 1	599.19				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-19 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 TCAP Mathematics Scores—Year 1, Seventh Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	508.60	3.89	6	130.64	0.000
	MCLA	-12.03	5.49	6	-2.19	0.070
Student	*READ 180*	-2.74	3.27	562	-0.84	0.403
	***READ 180**MCLA**	**-1.60**	**4.70**	**562**	**-0.34**	**0.733**
	Gender	6.28	2.28	562	2.75	0.007
	TCAP Math 06	0.58	.04	562	15.48	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	79.05	0.072			
Student	Level 1	1024.75				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-20 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 TCAP Science Scores—Year 1, Seventh Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	187.75	1.76	3	106.72	0.000
	MCLA	-8.55	2.84	3	-3.01	0.067
	Percent African American	-1.91	1.07	3	-1.78	0.169
	Percent ELL	-3.58	1.55	3	-2.30	0.094
	Size	0.01	0.01	3	2.37	0.088
Student	*READ 180*	-4.02	2.27	535	-1.77	0.077
	***READ 180**MCLA**	**3.55**	**3.22**	**535**	**1.10**	**0.271**
	FRL	4.12	2.49	535	1.65	0.099
	ELL	-9.33	3.82	535	-2.44	0.015
	TCAP Science 06	0.23	0.04	535	5.25	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	1.95	0.005			
Student	Level 1	357.42				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-21 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 TCAP Social Studies Scores—Year 1, Seventh Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	184.84	1.73	5	107.09	0.000
	MCLA	-2.35	2.46	5	-0.10	0.384
	Percent FRL	-1.25	0.47	5	-2.65	0.045
Student	*READ 180*	0.39	1.83	533	0.21	0.834
	***READ 180**MCLA**	**2.28**	**2.60**	**533**	**0.88**	**0.380**
	TCAP Social Studies 06	0.15	0.03	533	4.81	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	13.13	0.054			
Student	Level 1	229.26				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-22 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 ITBS Total Reading Scores—Year 1, Eighth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	205.06	2.38	4	86.33	0.000
	MCLA	-3.94	3.17	4	-1.24	0.282
	Percent Female	1.83	0.84	4	2.17	0.092
	Percent ELL	1.21	0.39	4	3.12	0.042
Student	*READ 180*	-1.72	2.67	327	-0.64	0.521
	***READ 180**MCLA**	**3.50**	**3.67**	**327**	**0.95**	**0.342**
	ELL	-9.07	4.37	327	-2.08	0.038
	ITBS Reading Total 06	0.36	0.06	327	5.98	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	8.75	0.029			
Student	Level 1	293.19				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† *The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.*

Table I-23 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 ITBS Comprehension Scores—Year 1, Eighth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	199.90	2.83	4	70.54	0.000
	MCLA	-8.87	3.78	4	-2.35	0.075
	Percent Female	2.83	1.00	4	2.82	0.049
	Percent ELL	1.47	0.46	4	3.16	0.042
Student	*READ 180*	-3.79	3.20	328	-1.19	0.237
	***READ 180**MCLA**	**8.89**	**4.39**	**328**	**2.03**	**0.043**
	Gender	3.19	2.19	328	1.46	0.146
	African American	32.26	19.80	328	1.63	0.104
	Hispanic	46.87	21.11	328	2.22	0.027
	ELL	-23.01	8.27	328	-2.78	0.006
	ITBS Comprehension 06	0.35	0.06	328	6.12	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	19.73	0.044			
Student	Level 1	432.82				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† *The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.*

Table I-24 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 ITBS Vocabulary Scores—Year 1, Eighth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	215.97	3.65	3	59.18	0.000
	MCLA	-10.07	5.68	3	-1.77	0.170
	Percent Female	2.74	1.44	3	1.91	0.147
	Percent FRL	1.49	0.81	3	1.83	0.161
	Size	0.02	0.01	3	2.25	0.100
Student	*READ 180*	0.61	3.42	333	0.18	0.859
	***READ 180**MCLA**	**-2.62**	**4.63**	**333**	**-0.57**	**0.571**
	Gender	-3.26	2.29	333	-1.43	0.155
	ELL	-7.94	5.51	333	-1.44	0.150
	ITBS Vocabulary 06	0.28	0.06	333	4.59	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	0.14	0.000			
Student	Level 1	454.56				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-25 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 TCAP Reading/LA Scores—Year 1, Eighth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	519.01	4.28	4	121.32	0.000
	MCLA	-21.46	5.98	4	-3.58	0.035
	Percent Female	4.27	1.40	4	3.05	0.043
	Percent FRL	1.91	0.87	4	2.21	0.089
Student	*READ 180*	-5.28	4.15	455	-1.27	0.204
	***READ 180**MCLA**	**5.82**	**5.56**	**455**	**1.05**	**0.297**
	Gender	7.11	2.77	455	2.56	0.011
	African American	40.40	29.63	455	1.36	0.174
	Hispanic	56.72	31.29	455	1.81	0.070
	FRL	-6.45	4.19	455	-1.54	0.124
	ELL	-24.30	11.30	455	-2.15	0.032
	TCAP Reading 06	0.32	0.05	455	5.78	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	10.80	0.011			
Student	Level 1	444.31				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† *The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.*

Table I-26 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 TCAP Mathematics Scores—Year 1, Eighth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	516.83	4.76	4	108.67	0.000
	MCLA	-16.02	6.97	4	-2.30	0.080
	Percent Female	3.30	1.69	4	1.96	0.119
	Percent FRL	1.93	1.03	4	1.87	0.133
Student	*READ 180*	2.12	4.16	455	0.51	0.609
	***READ 180**MCLA**	**-6.31**	**5.60**	**455**	**-1.12**	**0.261**
	African American	167.98	28.70	455	5.85	0.000
	Hispanic	188.46	30.35	455	6.21	0.000
	ELL	-16.80	11.12	455	-1.51	0.131
	TCAP Math 06	0.45	0.03	455	13.78	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	53.29	0.042			
Student	Level 1	1219.24				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-27 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 TCAP Science Scores—Year 1, Eighth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	187.61	1.49	5	125.51	0.000
	MCLA	0.70	1.85	5	0.38	0.721
	Size	-0.02	.00	5	-6.74	0.000
Student	*READ 180*	-1.50	2.02	433	-0.74	0.458
	***READ 180**MCLA**	**-0.23**	**2.67**	**433**	**-0.09**	**0.932**
	Gender	-2.10	1.34	433	-1.57	0.117
	TCAP Science 06	0.18	0.04	433	4.94	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	25.91	0.115			
Student	Level 1	200.01				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-28 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Impact in MCLA Treatment and Control Schools on 2007 TCAP Social Studies Scores—Year 1, Eighth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	186.14	2.56	6	72.63	0.000
	MCLA	-2.18	3.50	6	-0.62	0.556
Student	*READ 180*	-1.22	2.18	433	-0.56	0.574
	***READ 180**MCLA**	**2.31**	**2.97**	**433**	**0.78**	**0.437**
	African American	27.89	14.49	433	1.93	0.054
	Hispanic	20.95	15.05	433	1.39	0.165
	TCAP Social Studies 06	0.30	0.05	433	6.27	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Intercept	14.24	0.060			
Student	Level 1	224.56				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† *The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.*

Table I-29 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* One-Year Impact in Year 2 in MCLA Treatment and Control Schools on 2008 ITBS Total Reading Scores—Sixth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	184.56	1.04	5	177.11	0.000
	MCLA	-0.27	1.44	5	-0.19	0.858
	Percent SPED	-0.58	0.20	5	-2.83	0.038
Student	*READ 180*	-1.57	1.43	492	-1.10	0.274
	***READ 180**MCLA**	**1.64**	**2.00**	**492**	**0.82**	**0.411**
	FRL	2.08	2.25	492	0.93	0.354
	ITBS Total Reading 07	0.45	0.04	492	11.24	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Level 2	0.04	0.017			
Student	Level 1	119.47				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† *The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.*

Table I-30 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* One-Year Impact in Year 2 in MCLA Treatment and Control Schools on 2008 ITBS Comprehension Scores—Sixth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	182.79	1.37	6	133.37	0.000
	MCLA	-1.91	1.91	6	-1.00	0.357
Student	*READ 180*	-2.63	1.90	497	-1.40	0.165
	***READ 180**MCLA**	**1.65**	**2.66**	**497**	**0.62**	**0.534**
	Gender	2.32	1.30	497	1.79	0.073
	ITBS Comprehension 07	0.40	0.04	497	9.50	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Level 2	1.29	0.005			
Student	Level 1	207.25				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† *The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.*

Table I-31 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* One-Year Impact in Year 2 in MCLA Treatment and Control Schools on 2008 ITBS Vocabulary Scores—Sixth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	187.18	1.35	5	138.53	0.000
	MCLA	0.33	1.88	5	0.17	0.869
	Percent SPED	-0.94	0.27	5	-3.54	0.022
Student	*READ 180*	-1.71	1.87	502	-0.92	0.359
	***READ 180**MCLA**	**2.31**	**2.59**	**502**	**0.89**	**0.372**
	FRL	4.71	2.89	502	1.63	0.103
	ITBS Vocabulary 07	0.33	0.04	502	8.29	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Level 2	0.02	0.012			
Student	Level 1	204.91				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† *The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.*

Table I-32 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* One-Year Impact in Year 2 in MCLA Treatment and Control Schools on 2008 TCAP Reading/LA Scores—Sixth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	491.35	2.55	3	193.01	0.000
	MCLA	6.54	3.42	3	1.91	0.146
	Percent African American	-1.41	0.45	3	-3.12	0.069
	Percent SPED	2.24	0.97	3	2.31	0.094
	Percent FRL	-1.88	1.06	3	-1.77	0.171
Student	*READ 180*	-0.44	3.21	658	-0.14	0.892
	***READ 180**MCLA**	**4.44**	**4.45**	**658**	**1.00**	**0.318**
	Gender	7.04	2.17	658	3.25	0.002
	FRL	6.33	4.86	658	1.30	0.194
	TCAP Reading 07	0.47	0.05	658	10.12	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC †**			
School	Level 2	0.11	0.003			
Student	Level 1	757.07				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-33 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* One-Year Impact in Year 2 in MCLA Treatment and Control Schools on 2008 TCAP Mathematics Scores—Sixth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	501.90	3.61	5	139.02	0.000
	MCLA	-5.18	5.30	5	-0.98	0.374
	Percent SPED	1.95	0.78	5	2.50	0.053
Student	*READ 180*	-6.13	2.79	662	-2.20	0.028
	***READ 180**MCLA**	**6.20**	**3.96**	**662**	**1.57**	**0.118**
	TCAP Math 07	0.62	0.04	662	16.04	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC †**			
School	Level 2	30.80	0.035			
Student	Level 1	591.59				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-34 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* One-Year Impact in Year 2 in MCLA Treatment and Control Schools on 2008 TCAP Science Scores—Sixth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	189.51	1.42	3	133.55	0.000
	MCLA	-5.31	2.08	3	-2.55	0.075
	Percent African American	-1.68	0.77	3	-2.17	0.108
	Percent SPED	0.61	0.28	3	2.21	0.104
	Percent ELL	-2.29	1.11	3	-2.06	0.123
Student	*READ 180*	-1.84	1.74	650	-1.05	0.292
	***READ 180**MCLA**	**2.93**	**2.40**	**650**	**1.22**	**0.223**
	Gender	-1.55	1.16	650	-1.33	0.184
	TCAP Science 07	0.33	0.03	650	9.49	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Level 2	0.03	0.001			
Student	Level 1	216.64				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-35 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* One-Year Impact in Year 2 in MCLA Treatment and Control Schools on 2008 TCAP Social Studies Scores—Sixth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	183.43	2.58	3	71.06	0.000
	MCLA	4.40	3.91	3	1.13	0.343
	Percent African American	-0.91	0.54	3	-1.69	0.186
	Percent SPED	2.10	1.11	3	1.88	0.150
	Percent FRL	-2.15	1.30	3	-1.66	0.194
Student	*READ 180*	-0.75	1.97	640	-0.38	0.703
	***READ 180**MCLA**	**-2.83**	**2.76**	**640**	**-1.03**	**0.306**
	Gender	-2.92	1.32	640	-2.20	0.028
	FRL	-3.67	3.02	640	-1.21	0.226
	ELL	-12.70	5.85	640	-2.17	0.030
	African American	-14.59	5.45	640	-2.67	0.008
	TCAP Social Studies 07	0.41	0.05	640	8.67	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Level 2	11.93	0.031			
Student	Level 1	275.04				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† *The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.*

Table I-36 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Two-Year Impact in Year 2 in MCLA Treatment and Control Schools on 2008 ITBS Total Reading Scores—Seventh and Eighth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	195.12	1.39	3	140.15	0.000
	MCLA	4.87	1.96	3	2.48	0.079
	Percent African American	-0.47	0.25	3	-1.87	0.154
	Percent SPED	0.90	0.55	3	1.65	0.194
	Percent FRL	-1.95	0.62	3	-3.14	0.069
Student	Grade 8 in Year 2	4.34	1.27	648	3.43	0.001
	READ 180	2.10	1.78	648	1.18	0.239
	***READ 180**MCLA**	**-3.30**	**2.58**	**648**	**-1.28**	**0.201**
	Gender	1.63	1.23	648	1.32	0.188
	ITBS Total Reading 06	0.49	0.04	648	11.65	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Level 2	0.32	0.016			
Student	Level 1	246.62				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-37 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Two-Year Impact in Year 2 in MCLA Treatment and Control Schools on 2008 ITBS Comprehension Scores—Seventh and Eighth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	193.53	1.62	4	119.20	0.000
	MCLA	0.37	2.39	4	0.16	0.885
	Percent African American	-0.42	0.21	4	-1.97	0.117
	Percent Female	2.12	0.65	4	3.24	0.041
Student	Grade 8 in Year 2	2.85	1.54	656	1.85	0.064
	READ 180	0.88	2.17	656	0.41	0.685
	***READ 180*MCLA**	**-3.54**	**3.13**	**656**	**-1.13**	**0.260**
	Gender	2.85	1.53	656	1.86	0.063
	ITBS Comprehension 06	0.39	0.05	656	8.64	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Level 2	0.11	0.014			
Student	Level 1	385.32				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† *The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.*

Table I-38 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Two-Year Impact in Year 2 in MCLA Treatment and Control Schools on 2008 ITBS Vocabulary Scores—Seventh and Eighth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	200.12	1.56	5	128.15	0.000
	MCLA	2.64	2.21	5	1.20	0.286
	Percent FRL	-1.27	0.40	5	-3.18	0.029
Student	Grade 8 in Year 2	7.45	1.66	664	4.48	0.000
	READ 180	3.65	2.28	664	1.60	0.110
	***READ 180*MCLA**	**-3.70**	**3.29**	**664**	**-1.12**	**0.262**
	Hispanic	12.64	6.05	664	2.09	0.037
	ELL	-7.94	6.04	664	-1.31	0.189
	ITBS Vocabulary 06	0.31	0.04	664	7.37	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Level 2	0.18	0.012			
Student	Level 1	428.29				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† *The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.*

Table I-39 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Two-Year Impact in Year 2 in MCLA Treatment and Control Schools on 2008 TCAP Reading/LA Scores—Seventh and Eighth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	506.72	2.35	2	215.41	0.000
	MCLA	-2.19	3.50	2	-0.62	0.596
	Percent African American	-1.21	0.36	2	-3.41	0.182
	Percent Female	2.88	1.00	2	2.89	0.107
	Percent SPED	1.93	0.79	2	2.45	0.088
	Percent FRL	-1.91	1.04	2	-1.84	0.187
Student	Grade 8 in Year 2	16.47	1.76	802	9.34	0.000
	READ 180	2.40	2.50	802	.99	0.339
	***READ 180**MCLA**	**-2.87**	**3.67**	**802**	**-0.78**	**0.434**
	Gender	3.58	1.76	802	2.03	0.042
	ELL	-9.99	3.59	802	-2.79	0.006
	TCAP Reading 06	0.244	0.04	802	6.89	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Level 2	0.09	0.021			
Student	Level 1	617.87				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-40 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Two-Year Impact in Year 2 in MCLA Treatment and Control Schools on 2008 TCAP Mathematics Scores—Seventh and Eighth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	516.98	3.65	5	141.56	0.000
	MCLA	-9.70	5.43	5	-1.79	0.133
	Percent ELL	-1.29	0.78	5	-1.67	0.156
Student	Grade 8 in Year 2	4.41	2.09	805	2.10	0.035
	READ 180	2.63	2.95	805	0.89	0.373
	***READ 180**MCLA**	**-7.02**	**4.33**	**805**	**-1.62**	**0.105**
	Gender	4.17	2.08	805	2.01	0.045
	TCAP Math 06	0.56	0.04	805	15.49	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Level 2	29.96	0.060			
Student	Level 1	860.62				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† *The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.*

Table I-41 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Two-Year Impact in Year 2 in MCLA Treatment and Control Schools on 2008 TCAP Science Scores—Seventh and Eighth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	185.76	1.29	3	143.53	0.000
	MCLA	-2.37	1.88	3	-1.26	0.296
	Percent Female	1.97	0.52	3	3.76	0.065
	Percent SPED	0.52	0.26	3	2.01	0.130
	Percent ELL	0.45	0.27	3	1.66	0.192
Student	Grade 8 in Year 2	-2.81	1.12	778	-2.51	0.012
	READ 180	-0.18	1.60	778	-0.11	0.920
	***READ 180**MCLA**	**0.58**	**2.28**	**778**	**0.25**	**0.800**
	Gender	-1.63	1.12	778	-1.46	0.145
	African American	-6.42	4.06	778	-1.58	0.114
	ELL	-6.38	4.25	778	-1.50	0.134
	TCAP Science 06	0.32	0.03	778	9.18	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Level 2	0.04	0.027			
Student	Level 1	240.07				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.

Table I-42 Final Model* for Estimating Fixed and Random Effects for Determining *READ 180* Two-Year Impact in Year 2 in MCLA Treatment and Control Schools on 2008 TCAP Social Studies Scores—Seventh and Eighth Grade

Fixed Effects						
Level	**Effect**	**Estimate**	**St Error**	**DF**	**t-value**	**Pr > |t|**
School	Intercept	188.32	0.97	3	194.29	0.000
	MCLA	-3.75	1.43	3	-2.63	0.071
	Percent African American	-1.20	0.60	3	-2.00	0.132
	Percent SPED	-0.45	0.20	3	-2.24	0.101
	Percent ELL	-2.44	0.85	3	-2.88	0.067
Student	*READ 180*	-1.40	1.24	775	-1.13	0.259
	***READ 180**MCLA**	**0.28**	**1.79**	**775**	**0.17**	**0.876**
	Hispanic	4.85	1.94	775	2.50	0.013
	TCAP Social Studies 06	0.14	0.02	775	5.83	0.000
Random Effects						
Level	**Variance Components**	**Variance**	**ICC** †			
School	Level 2	0.02	0.035			
Student	Level 1	145.86				

** Final model includes the treatment effects of READ 180 and MCLA, the cross-level interaction of READ 180 and MCLA, and all covariates with p<0.2.*

† *The interclass correlation coefficient was calculated using a model with no covariates. The variance components are based on the final model results displayed in the table.*

Principal/Assistant Principal Interview Guide (Cohort II Schools)
Spring 2010

Hello, this is _____ from _____ in _____, ____. We've contracted with Memphis City Schools to conduct an independent evaluation of the Memphis Striving Readers Program. As part of this four-year evaluation, we are seeking to describe your school's reading practices. You have been asked to participate in this interview because of your knowledge about your school as its principal or assistant principal.

This interview should take **approximately 50 minutes**. Please answer the questions as best as you can. As indicated in the informed consent form that you signed, I would like to audiotape this interview so that I may document your responses the most accurately. Only evaluators will listen to the audiotape and have access to a transcription of our conversation. Your responses will be kept confidential and you will never be identified by name when we report the results of these interviews. Your identity will never be revealed to program staff or any individual associated with your school or school district. While researchers may report quotes collected during interviews with school principals, every effort possible step will be taken to ensure your confidentiality. RBS and Edvantia staff members will store this information in a secure location.[1] You are free to stop participating or withdraw at any time. Let me know if you would like to skip a question because you do not know how to respond to it.

Do I have permission to audiotape this interview? May I start the interview now?

1. How long have you been in your current position as principal/assistant principal?

2. Do you have any prior experience with literacy instruction? Please describe.

3. What is your understanding of the Memphis Content Literacy Academy (MCLA) and its purpose?

4. Please describe any specific links (or disconnects) between MCLA and current school improvement plans.

5. To what extent, if at all, have you been involved in MCLA since school started this year?
   Did you and/or designated administrative staff attend the kickoff? [Probe: Who attended?]
   Did you and/or designated administrative staff attend the first principal fellowship meeting? [Probe: Who attended?]

[1] Data collected for research purposes are stored in compliance with ISO 17799 requirements for access, security, and redundancy. Data are stored in an encrypted format in centralized, electronically and physically secure servers at RBS and Edvantia for a period not to exceed five years. All electronic data of a personal nature are safeguarded and available only to those project leaders, staff, and technologists having a need to know within the specific criteria as set forth in the approved project plan. The Edvantia Institutional Review Board has the authority to inspect consent records and data files only to assure compliance with approved procedures.

Who at this school handled the rostering of students randomly assigned to receive *READ 180*?
How many Principal Fellowship meetings did you attend this year? Which other staff, if any, also attended these sessions?

6. What did you expect teachers to be able to do as a result of their participation in MCLA?

7. Do you think that MCLA requires teachers to do different things in addition to what is already expected of them? [Probe: If YES, please describe whether the additional demands support or conflict with achievement of other/more important priorities.]

8. How important was it for you to communicate to teachers the expectation that they work with their coach to implement MCLA strategies? [Probe: In what settings, if any, and how often, if at all, would you this occured? Please describe.]

9. What were your expectations of the principal fellowship? [Probe: What, specifically, did you expect to learn? What supports, if any, were you expecting the fellowship to provide?]

10. To what extent do you (or your designee) mention the importance of literacy in the content areas in **daily school announcements**? [Probe: Would you say once a week, every other week, every now and then? What was the nature of those comments? Can you give me an example?]

11. How often, if at all, has MCLA been discussed at **faculty meetings**? [Probe: How frequent are faculty meetings at your school? Is MCLA discussed at each meeting? What in particular is discussed?]

12. In what ways, if at all, have you or your staff sought out [or reallocated] additional **resources** related to literacy instruction?

13. Which **MCLA strategie**s, if any, have you seen "in action?" [Probe: What do you notice when you see MCLA in action?]

14. To what extent, if at all, did your school's **schedule** enable grade-level teachers in a department to work together on integrating literacy? [Probe: How frequently did these meetings occur? How long were these meetings?]

15. Since the start of the 2009-2010 school year, how often if at all, did you or designated staff conducted **walkthroughs** content area classes? What was the purpose of those walkthroughs? What did you look for when you observed part of a lesson?

16. How realistic was it to expect you to conduct **walkthroughs** and observations of MCLA teachers' **literacy strategy implementation**? [Probe: How often?]

17. To what extent did you (or designated staff) provide feedback to teachers about observed use of literacy strategies? [Probe: How soon after the observation was feedback provided? What,

specifically, did you provide feedback about? Did you comment on teachers' use of strategies, students' use of strategies, both, or neither?]

18. Who was your designated MCLA literacy coach? What were your expectations for her? In what ways, if any, did you interact with her? Did you see her as a resource for providing school-wide support? [Probe: Was she a member of any school-wide teams you assembled? Did you expect her to provide in-service professional development for school staff? Did you seek her input on decisions related to literacy? Ask for supporting details/examples.] *{NOTE: Interviewer should let respondent name teams rather than mention leadership team specifically.}*

19. **School Improvement Goals:** What were your school's main student achievement improvement goals for 2009-2010? [Probe: Was MCLA mentioned in the school's improvement plan?]

20. How were these goals identified? [Probes: Internally, by the principal/school staff? Under NCLB as a result of performance on adequate yearly progress (AYP) indicators?]

21. How much teacher turnover was there this year?

Thank you so much for your time today.

Teacher Survey

Researchers are continuing to study a Striving Readers Project involving your school. Please take a few minutes to complete this final survey even if you have done so previously. To protect your identity, only researchers will have access to surveys and only group-level results will be analyzed and reported. ***Thank You!***

Please fill in the best response for each item below. (Like this: ● Not like this: ✓ ✗ /)

Name (First, Last):

_____

Last 6 digits of your social security number:

__ __ __ __ __ __

1. **Gender**: ○ Male ○ Female

2. **Race/Ethnicity**:

- ○ Asian/Pacific Islander
- ○ Black, non-Hispanic
- ○ Hispanic
- ○ Native American/Alaska Native
- ○ White, non-Hispanic
- ○ Multi-racial
- ○ Other (specify:_____)

3. **Age**:

○ 20-29 ○ 30-39 ○ 40-49
○ 50-59 ○ 60-69 ○ 70 +

4. **Current level of education**:

- ○ Bachelor's degree
- ○ Bachelor's degree + 15 or more credits
- ○ Master's degree
- ○ Master's degree + 15 or more credits
- ○ Educational Specialist (Ed.S.)
- ○ Doctorate

5. **Current job title**:

- ○ Full-time teacher
- ○ Part-time teacher
- ○ Literacy coach
- ○ Other (specify: _____)

6. **Which Tennessee teacher license do you hold**?

- ○ Alternative license
- ○ Apprentice teacher license
- ○ Interim license
- ○ Out-of-state teacher license
- ○ Professional teacher license
- ○ None
- ○ Other (specify:_____)

7. **Are you licensed (professional or apprentice) in the grade & subject you currently teach**?

○ Yes ○ No

8. **Where have you taught this year?**

○ A. Maceo Walker ○ Hickory Ridge
○ American Way ○ Lanier
○ Corry ○ Riverview
○ Hamilton ○ Sherwood

9. **Did you attend Memphis City public schools as a student?**

○ Yes ○ No

→ Please complete next page →

10. **Please bubble the subject(s) and grade level(s) you currently teach.**

	6th	7th	8th
Mathematics	○	○	○
English/Language Arts	○	○	○
READ 180	○	○	○
Social Studies	○	○	○
Science	○	○	○
Special Education	○	○	○
Other: _____	○	○	○

11. **How many class periods do you teach on a typical day?**

○ none ○ one ○ two
○ three ○ four ○ five
○ six or more

12. **How many years have you been teaching FULL TIME <u>at your current school</u>?**

○ I'm not, or I have never been full time
○ 0-2 years
○ 3-5 years
○ 6-10 years
○ 11-20 years
○ 21-30 years
○ More than 30 years

13. **This past school year (2009-2010),** how often would you say you helped your students select CRC materials appropriate for their reading level?

○ Less than once per month
○ About once a month
○ A few times a month
○ About 1-2 days per week
○ At least 3 days per week

14. If you answered ABOUT ONCE A MONTH OR MORE FREQUENTLY in Ques. #13, in what percentage **of your class periods did you** help students select materials at their reading level?

○ Less than 25%
○ 25%
○ 25-49%
○ 50%
○ 75%
○ 100%

15. Considering all of the professional development you had **THIS SCHOOL YEAR** (2009-2010) (excluding pre-service training), approximately **how many total hours** did you spend in activities in which the following subjects were a major focus:

	None	1-8 Hours	9-32 Hours	More than 32 Hours
In-depth study in the subject area which you teach	○	○	○	○
New methods of teaching (e.g. cooperative learning)	○	○	○	○
State or district curriculum and performance standards	○	○	○	○
Integration of educational technology into the classroom	○	○	○	○
Student performance assessment (e.g. methods of testing, applying results to modify instruction)	○	○	○	○
Classroom management, including student discipline	○	○	○	○
Addressing the needs of English language learners or students from diverse cultural backgrounds	○	○	○	○
Addressing the needs of students with disabilities	○	○	○	○
Integrating literacy in the classroom	○	○	○	○

<u>→ Please complete next page →</u>

16. To what extent do you feel ***prepared*** to engage in the activities below, and ***how often*** (if at all) did you engage in those activities during the **school year (2009-10)**?

*Please check a box on the left that best represents how prepared you feel currently and the box on the right that reflects how often you used this technique during the 2009-2010 school year. Please fill only one bubble **per side** for each item below.*

Preparedness
1 – Not at all prepared
2 – A little prepared
3 – Prepared
4 – Well prepared
5 – Can teach others to do this

Frequency
1 – Never
2 – Rarely
3 – Sometimes
4 – Often
5 – Almost always

Not at all Prepared	A little Prepared	Prepared	Well Prepared	Can Teach Others to Do This			Never	Rarely	Sometimes	Often	Almost Always
○	○	○	○	○	a.	Have students read aloud from core subject area texts and/or supplemental texts daily for at least five minutes per period	○	○	○	○	○
○	○	○	○	○	b.	Identify "bridging books" (part story and part information)	○	○	○	○	○
○	○	○	○	○	c.	Ask higher order questions and require students to justify their answers	○	○	○	○	○
○	○	○	○	○	d.	Pre-test students before the beginning of a new unit of instruction	○	○	○	○	○
○	○	○	○	○	e.	Discuss and analyze new vocabulary before reading	○	○	○	○	○
○	○	○	○	○	f.	Show relationships of words/concepts using graphic organizers or thinking maps	○	○	○	○	○
○	○	○	○	○	g	Create, elaborate, and sort subject-related vocabulary word lists	○	○	○	○	○
○	○	○	○	○	h.	Establish the purpose(s) for reading a text selection	○	○	○	○	○
○	○	○	○	○	i.	Have students read in pairs	○	○	○	○	○
○	○	○	○	○	j.	Model for students, and provide guided practice with feedback on oral retelling strategies of selected subject area texts	○	○	○	○	○
○	○	○	○	○	k.	Model use of thinking maps to construct written summaries of selected text	○	○	○	○	○
○	○	○	○	○	l.	Link students' background knowledge and experiences to new vocabulary/concepts	○	○	○	○	○

→ Please complete next page →

16. Continued …

*Please check a box on the left that best represents how prepared you feel currently and the box on the right that reflects how often you used this technique during the 2009-2010 school year. Please fill only one bubble **per side** for each item below.*

Preparedness
1 – Not at all prepared
2 – A little prepared
3 – Prepared
4 – Well prepared
5 – Can teach others to do this

Frequency
1 – Never
2 – Rarely
3 – Sometimes
4 – Often
5 – Almost always

Not at all Prepared	A little Prepared	Prepared	Well Prepared	Can Teach Others to Do This			Never	Rarely	Sometimes	Often	Almost Always
○	○	○	○	○	m.	Model new learning strategies for students	○	○	○	○	○
○	○	○	○	○	n.	Differentiate instruction using multi-leveled materials	○	○	○	○	○
○	○	○	○	○	o.	Teach students to ask questions, before, during, and after reading text selections	○	○	○	○	○
○	○	○	○	○	p.	Provide guided practice for students trying out new learning skills with peer or teacher feedback	○	○	○	○	○
○	○	○	○	○	q.	Provide instruction on the different forms of writing found in content area textbooks	○	○	○	○	○
○	○	○	○	○	r.	Offer small group instruction and practice several times per week according to students' achievement levels in reading	○	○	○	○	○
○	○	○	○	○	s.	Use the writing process as part of content learning	○	○	○	○	○
○	○	○	○	○	t.	Adapt instruction for students having special needs	○	○	○	○	○
○	○	○	○	○	u.	Use cooperative learning groups	○	○	○	○	○
○	○	○	○	○	v.	Use oral reading (whole class/small group) in subject area materials	○	○	○	○	○
○	○	○	○	○	w.	Use benchmark assessment data to identify students' achievement of content-specific learning goals	○	○	○	○	○
○	○	○	○	○	x.	Use direct, explicit instruction when teaching new reading/study skills related to my core subject area	○	○	○	○	○

Thank you!

University of Memphis College of Education

College of Education
The University of Memphis
Instruction and Curriculum Leadership
RDNG 8543: Advanced Reading Instruction/ Special Learners, Focus on Improving Academic Vocabulary, Comprehension & Fluency
Fall 2009

College of Education Norms

I take 100% responsibility.
I seek equity of voice.
I am willing to talk about sensitive issues.
I listen for understanding.
I appreciate the strengths and contributions of others.
I bring positive energy and encouragement to the team.
I commit to the mission of the college.

ICL 7008: Seminar in Curriculum Improvement: Focus on Subject Area Vocabulary, Comprehension & Fluency Learning

Course Description:

The Memphis Content Literacy Academy is a practice-oriented course that explores 1) knowledge of relevant research involving urban populations, 2) essential skills and knowledge to learned, 3) evidence-based teaching practices, and 4) ways of adapting instruction to meet special student needs. Unlike other graduate courses, we will study a relative few concepts in depth and apply them in participants' own classrooms with the assistance of a Literacy Coach (LC).

Class Meetings: Time and Locations

Location for all classes: American Way Middle School

SCIENCE TEACHERS
Tuesdays, 4:15-7:15 P.M.

MATHEMATICS, LANGUAGE ARTS, & SOCIAL STUDIES TEACHERS
Thursdays, 4:15-7:15 P.M.

Suggested Text(s):

Marzano, R.J., & Pickering, D.J. (2005). *Building academic vocabulary: Teacher's Manual.* Alexandria, VA: Association for Supervision and Curriculum Development.

*These are provided free to you by the Striving Readers grant. PLEASE BRING THESE AND A TEACHER'S EDITION (TE) FROM ONE OF YOUR TEXTBOOKS USED FOR YOUR CLASSES TO EACH MEETING.

Other available resources:

- A "Curriculum Resource Center (CRC)" is located at your school this semester to assist you with your daily classroom instruction.

Support of Conceptual Framework:
This is the final of four semesters in a study of evidence-based literacy strategies that may be applied in core subject area and special education classrooms. This course is a major part of the *Memphis Striving Readers Project*, a federally funded program. The MCLA is a joint University of Memphis/Memphis City Schools venture aimed at helping subject area teachers at specially selected middle schools in MCS develop expertise in implementing scientifically-based literacy practices as part of instruction in mathematics, science, social studies, and language arts education so that children living at the poverty level can better realize their full potential in American education. Memphis is one of only eight experimental Striving Readers sites in The United States. Results of our project will be available to help teachers of middle school students all over America achieve their potential.

Course Objectives:
The objective of this course is to assist practicing teachers in improving middle school students' understanding of textbook readings BEFORE, DURING, and AFTER students read an assignment. We will engage in deeper understanding by reviewing and implementing selected strategies in the areas of VOCABULARY learning, COMPREHENSION of subject area texts, and increasing students' READING FLUENCY.

Schedule, Assignments, Exams, and Grading Criteria:

Session/ Date (week)	**Tentative Topics and Classroom Action Plans (CAPs)***	**Assignments & Other Critical Information**
Session 1 September 1, 3	**"Something Old, Something New"** **<u>INCREASING VOCABULARY KNOWLEDGE</u>** PART I: Course Introduction & Syllabus Review PART II: **TEACHING TACTIC/CONCEPT** Strategies to help students learn ***BEFORE-, DURING-*** and ***AFTER*** reading academic text assignments PART III: **BUILDING VOCABULARY** "Something Old": *Semantic Feature Analysis* (SFA); *Word Maps* (as an "assessment tactic") "Something New": ***Concept Maps;*** ***6 Degrees of Separation Game*** PART IV: Introducing Classroom Action Plan #1	1. **Identify a Unit of Study for CAP #1** (should be one coming up in a few weeks). 2. From the unit you have chosen for CAP #1, **select five (5) "non-negotiable" words/concepts** you feel all your student *must* learn and bring these to Session 2.
Session 2 Sept. 8, 10	PART 1: CAP #1 Discussion & demonstrations by the instructor on ways to implement CAP 1 in your core subject area classes PART II: Homework Application Construct a Pre-Test and Post-Test for whole class assessment using *word map* to administer to your classes PART III: Discuss "homework" assignments	1. ASSESSMENT TACTIC: Administer the "word maps pre-test" you constructed in class to at least one of your classes and complete the summary form provided in class. Bring your results to Session 3. 2. Bring your best ideas so far about implementing CAP #1 to share and discuss with our "community of learners" in Session 3.

Session 3 Sept. 15, 17	PART I: Homework Discussion & Analysis about *word maps* as an assessment tool. Discuss your students' range of knowledge of the five (5) "non-negotiable" words/concepts you identified for this unit of study PART II: OPTIONAL STRATEGY **Classroom Blogging** (with or without technology) PART III: In-class work session to prepare for CAP #1 "Community of scholars" work groups sharing ideas for CAP #1 from homework assignment PART IV: "Great Ideas" Gallery Walk for CAP #2	Schedule a time with your Literacy Coach to review your plans for CAP #1.
Session 4 Sept. 22, 24	**IMPROVING COMPREHENSION** PART I: "Something New" ASSESSMENT TACTIC ***Marzano's Question Stems*** as pre-test/post-test assessments PART II: "Something New" ***Previewing text*** readings using ***SEARCHES*** or ***THIEVES*** (BEFORE- Reading) ***Fix-Up Strategies*** (DURING- and AFTER Reading Academic Texts) PART III: Introducing Classroom Action Plan #2 PART IV: Discuss "homework" assignments	1. Identify a Unit of Study for CAP #2 (should be one coming up in a few weeks) and bring that information and texts you plan to use to Session 5. 2. ASSESSMENT TACTIC assignment: Identify 5-10 important facts and/or concepts from the unit you have identified to use in implementing CAP #2 and bring this information to Session 5 (a summary form will be provided in class for this task).
Session 5 Sept. 29, Oct. 1	PART I: Discussion & demonstrations by the instructor on ways to implement CAP 2 in your core subject area classes PART II: Homework Application Construct in class a Pre-Test and Post-Test for whole class assessment using ***Marzano's Question Stems*** PART III: Teacher Tactic OPTION Presentation on how teachers can do a ***content analysis*** to identify key facts, concepts, and generalizations in a unit of study PART IV: Discuss "homework" assignments **CAP # 1 DUE**	1. ASSESSMENT TACTIC: Administer the *Marzano's Question Stems* pre-test you constructed in class to at least one of your classes and complete the student summary form provided in class. Bring your results to Session 6. 2. Bring your best ideas so far about implementing CAP #2 to share and discuss with our "community of learners" in Session 6. An outline form is to be provided for this assignment.

Session 6 Oct. 6, 8	PART I: Homework Discussion & Analysis about *Marzano's Question Stems* as an assessment tool. Discuss your students' range of knowledge of the five (5) "non-negotiable" words/concepts you identified for this unit of study. PART II: OPTIONAL STRATEGY **Wiki Writing** (with or without technology) PART III: In-class "Community of Scholars" work groups sharing ideas for CAP #2 PART IV: "Great Ideas" Gallery Walk for CAP #2	Schedule a time with your Literacy Coach to review your plans for CAP #2.
Session 7 Oct. 13, 15	**BUILDING READING FLUENCY** PART I: "Something New" ASSESSMENT TACTIC "**one-minute of academic reading"** PART II: "Something New" ***Neurological Impress* & *Scooping*** PART III: Introducing Classroom Action Plan #3 PART IV: Discuss "homework" assignment	1. Identify a Unit of Study for CAP #3 (should be one coming up in a few weeks) and bring that information and texts you plan to use to Session 8. 2. ASSESSMENT TACTIC assignment: **Identify a 200-word passage** from the unit of study you select for implementing CAP #3. You may use a reading from your adopted textbook or a supplemental text. Bring a copy of this passage to Session 8.
Session 8 Oct. 20, 22	PART I: Demonstrations by the instructor on ways to implement strategies in your core subject area for CAP #3 using ***Neurological Impress* & *Scooping*** as well as other strategies PART II: Using materials from your homework assignment, construct a whole class assessment using the **one-minute of academic reading** strategy PART III: Discuss "homework" assignment	1. ASSESSMENT TACTIC: Administer the **one-minute of academic reading** pre-test you constructed in class to at least one of your classes and complete the student summary form provided in class. Bring your results to Session 9. 2. Bring your best ideas so far about implementing CAP #3 to share and discuss with our "community of learners" in Session 6. An outline form is to be provided for this assignment.

Session 9 Oct. 27, 29	**In-class work session to prepare for CAP #3** PART III: In-class "Community of Scholars" work groups sharing ideas for CAP #3 PART IV: "Great Ideas" Gallery Walk for CAP #3 **CAP #2 Due**	Schedule a time with your Literacy Coach to review your plans for CAP #3

** Please note that changes may be made to the course activities and assignments at the discretion of the MCLA Leadership Team.*
*** All readings and assignments should be completed by the date of the class meeting indicated.*

RequirementsPossible Points

Classroom Action Plan (CAP): There will be three (3) Classroom Action Plans (CAP) assigned for you to implement in your classroom. Your Instructional Coach will meet with in August or early September to discuss the procedure for completing this requirement. The CAPs will also be posted on our website, www.memphisstrivingreaders.org. ***Following are the deadlines for turning in your completed CAPs:*** **60**

CAP #1 is due by not later than class time on **September 29/October 2** (Turn in to your Instructor)
CAP #2 is due by not later than class time **October 27/29** (Turn in to your Instructor)
CAP #3 is due by not later than **November 20** (Turn in to your Literacy Coach at Your School)

Attendance & Participation: You are expected to attend all class sessions and participate in "Instructional Conversations (IC)" and "Joint Productive Activities (JPA)." Your participation will be evaluated each week by your peers and the instructor. **40**

Grading Scale:	A = 93 – 100 points	B = 85 – 92 points	C = 77 – 84 points
	D = 69 – 76 points	F = 66 points and below	

Implementing Classroom Action Plans: How the Literacy Coaches Will Assist You At Your School

Literacy Coaches (LC) are provided at your school primarily to assist you in implementing Classroom Action Plans (CAPs), find materials and ideas for your classes, and to help you solve any instructional issues you feel will help your students learn. They are also in charge of the new Curriculum Resource Center (CRC) at your school that houses supplemental teaching/learning materials for your instruction. LCs are never put in the position of serving as a teacher appraiser for MCS or the principal-- they are there to be helpful colleague.

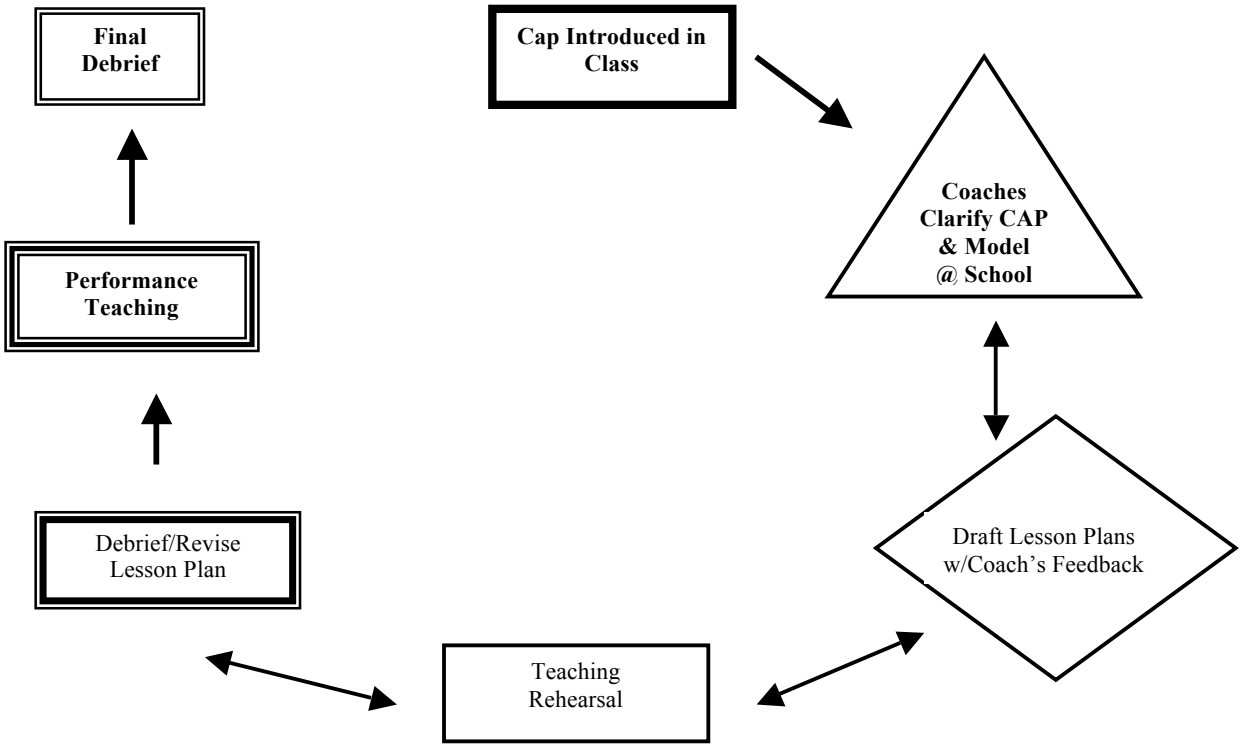
Implementing Classroom Action Plans (CAPs): How the Instructional Coaches Will Assist You At Your School (continued)

In terms of designing and implementing CAPs and your classroom, the ICs will use a routine following these steps:

1. The Classroom Action Plan (CAP) will be introduced in class by your instructor.
2. Your Literacy Coach(es) will meet with you at your school to clarify the CAP further, answer questions, model the strategy as needed, and schedule times and dates to meet with you for future CAP activities.

3. After you draft your lesson plans for carrying out the CAP, your LC will meet with you to review the lesson plans and provide feedback. They will also confirm a time to watch you teach one class session from your plan (called "Teaching Rehearsal").
4. The LC will next observe your "Teaching Rehearsal" and provide feedback (Debrief) later that day or the next day. This Debrief is intended to be a formative assessment and you will not be graded.
5. After your Debrief with the LC following your Teaching Rehearsal, you will revise your lesson plans as needed.
6. "Performance Teaching" is the final step in implementing your CAP and will determine your grade for the CAP. The IC will observe one class session and then Debrief with you again to discuss your execution of the plan and provide helpful feedback.

Following is a model that shows the **CAP Coaching Cycle**:



Other Course Requirements

Professional Participation: Your active participation in this class is essential for building a productive learning community. It is expected that you will give freely of your ideas, constructively react to the ideas of others, and offer constructive suggestions for the good of the group. Responsibility for participation also includes: completing assignments on schedule, a willingness to take risks in sharing your opinions, and verbally participating in class discussions and activities.

Attendance Requirements for this Course: Class interactions are critical to professional growth and development. Class attendance and cooperative engagement in class cannot be duplicated in any other way. You are expected to attend **all** classes for the full time period called for in the schedule. Attendance will be documented at each class period and includes coming late to class or leaving early. Two late arrivals to class and/or early exits total one absence. Class attendance will be reflected in your participation grade. **For every absence, beginning with the *second* absence, *five points* will be deducted from your participation grade earned for each absence. Missing three or more classes will result in a failing grade.**

Americans with Disabilities Act: The University of Memphis does not discriminate on the basis of disability in the recruitment and admission of students, the recruitment and employment of faculty and staff, and the operation of any of its programs and activities, as specified by federal laws and regulations. *The student has the responsibility of informing the course instructor (at the beginning of the course) of any disabling condition, which will require modification to avoid discrimination*. Faculty are required by law to provide "reasonable accommodation" to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty at the beginning of the semester and in providing authorized documentation through designated administrative channels.

Academic Integrity and Student Conduct:
Expectations for academic integrity and student conduct are described in detail on the website of the Office of Student Judicial and Ethical Affairs (http://saweb.memphis.edu/judicialaffairs). Please take a look, in particular, at the sections about "Academic Dishonesty," "Student Code of Conduct and Responsibilities," and "Disruptive Behaviors." We expect students to be aware of these guidelines and to conduct themselves accordingly.

University of Memphis College of Education

College of Education
The University of Memphis
Instruction and Curriculum Leadership
ICL XXXX: Advanced Reading Instruction/ Special Learners, Focus on Improving Academic Vocabulary, Comprehension & Fluency
Spring 2010

College of Education Norms

I take 100% responsibility.
I seek equity of voice.
I am willing to talk about sensitive issues.
I listen for understanding.
I appreciate the strengths and contributions of others.
I bring positive energy and encouragement to the team.
I commit to the mission of the college.

ICL XXXX: Seminar in Curriculum Improvement: Focus on Subject Area Vocabulary, Comprehension & Fluency Learning

Course Description:

The Memphis Content Literacy Academy is a practice-oriented course that explores 1) knowledge of relevant research involving urban populations, 2) essential skills and knowledge to learned, 3) evidence-based teaching practices, and 4) ways of adapting instruction to meet special student needs. Unlike other graduate courses, we will study a relative few concepts in depth and apply them in participants' own classrooms with the assistance of a Literacy Coach (LC).

Class Meetings: Time and Locations

Location for all classes: American Way Middle School

SCIENCE TEACHERS
Tuesdays, 4:15-7:15 P.M.

MATHEMATICS, LANGUAGE ARTS, & SOCIAL STUDIES TEACHERS
Thursdays, 4:15-7:15 P.M.

Support of Conceptual Framework:
This is the final of four semesters in a study of evidence-based literacy strategies that may be applied in core subject area and special education classrooms. This course is a major part of the *Memphis Striving Readers Project*, a federally funded program. The MCLA is a joint University of Memphis/Memphis City Schools venture aimed at helping subject area teachers at specially selected middle schools in MCS develop expertise in implementing scientifically-based literacy practices as part of instruction in mathematics, science, social studies, and language arts education so that children living at the poverty level can better realize their full potential in American education. Memphis is one of only eight experimental Striving Readers sites in The United States. Results of our project will be available to help teachers of middle school students all over America achieve their potential.

Course Objectives:
The objective of this course is to assist practicing teachers in improving middle school students' understanding of textbook readings BEFORE, DURING, and AFTER students read an assignment. We will engage in deeper understanding by reviewing and implementing selected strategies in the areas of VOCABULARY learning, COMPREHENSION of subject area texts, and increasing students' READING FLUENCY.

Schedule, Assignments, Exams, and Grading Criteria:

Spring 2010 Class Sessions & Dates	Primary Topics for Professional Development	Assignments & Notes
Session 1 January 12, 14	Semester Outline & Syllabus Introducing Anchor Activities Review of Content Literacy Assessments Introduce Classroom Action Plan (CAP) #1	1. Identify an upcoming unit of study and select reading/text materials. 2. Select and Begin Administering Three Self-Selected Assessments (one each for Fluency, Vocabulary, Comprehension) after obtaining approval from your literacy coach.
Session 2 January 19, 21	Review of Before-During-, After Reading Options for Fluency and Vocabulary Development Analysis of Student Work for Planning Instruction Anchor Activities Part 2 Introduce Classroom Action Plan (CAP) #2	1. Complete Administration of three Self-Selected Assessments (one each for Fluency, Vocabulary, Comprehension). 2. Choose B-D-A Activities in at least two Categories (Fluency, Vocab., Comp) matched to student needs from your assessments. 3. Create/Choose Two Anchor Activities to include in your plan.
Session 3 January 26, 28	Review of Before-During-, After Reading Options for Comprehension Share Your Analysis of student work Poster Session #1: Tips	CAP #1 due at this class meeting with your literacy coach's signature. Prepare your first Poster Session that explains your implementation plan.
Session 4 February 2, 4	Share Your Plan in Poster Session #1 & Receive Suggestions from your Colleagues	Begin Implementation of your Content Literacy Unit (self-selected B-D-A , Anchor Activities, and Coordinated Homework Plan)
Session 5 February 9, 11	Homework & Parent Involvement Working with Over-aged Students	Continue Implementation of your Content Literacy Unit (self-selected B-D-A , Anchor Activities, and Coordinated Homework Plan)
Session 6 February 16, 18	NO CLASS - Continue Implementation of your Content Literacy Unit	In-school Implementation & Scheduled Consultation with Literacy Coaches/Course Instructor.

Session 7 February 23, 25	NO CLASS - Continue Implementation of your Content Literacy Unit	Final Week of In-school Implementation & Scheduled Consultation with Literacy Coaches/Course Instructor. Conduct Post-Teaching Assessments & Analysis by the end of this week; Compile & Discuss post-test results with your literacy coach.
Session 8 March 2, 4	Tips for Preparing Your Final Poster Session Bring descriptions of your Analysis of Student Work (pre- and post-test results), B-D-A, Anchor Activities, and Coordinated Homework Plan (from CAP #2)	CAP #2 due at this class meeting with your literacy coach's signature. Prepare for your Poster Session according to criteria specified in class.
Session 9 March 9, 11	Poster Sessions & Final Evaluation Planning for the Laureate Ceremony	
Session 10 TBA	Laureate Ceremony	

** Please note that changes may be made to the course activities and assignments at the discretion of the MCLA Leadership Team.*
*** All readings and assignments should be completed by the date of the class meeting indicated.*

Requirements & Possible Points

Classroom Action Plan (CAP): There will be two (2) Classroom Action Plans (CAP) assigned for you to implement in your classroom. Your Instructional Coach will meet with you to discuss the procedure for completing this requirement. **20**

Poster Sessions: You will make two poster presentations this semester as a way of sharing your work in the classroom. Guidelines will be provided. The first poster session will count 15 points, and the final poster session will be worth 35 points. **50**

Laureate Ceremony: Our final activity will be the Laureate Ceremony. Each participant will be asked to display their final poster session at this event. **10**

Attendance & Participation: You are expected to attend all class sessions and participate in Instructional Conversations and Joint Productive Activities (JPA). Your participation will be evaluated by your peers and the instructor. **20**

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Implementing Classroom Action Plans: How the Literacy Coaches Will Assist You At Your School

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Classroom Action Plan (CAP) #1 – Fall 2009
Vocabulary Instruction: BEFORE, DURING, AFTER Reading

Name_____**School**_____

Subject Area/Grade Level _____ **Date Assigned: September 1/3**

Due: At your class meeting on September 29/October 1

Directions: Develop lesson plans and execute your CLASSROOM ACTION PLAN (CAP) for your academic classes. Note: Please have your Literacy Coach(es) sign and date each stage of your CAP implementation.

Implementation Goals:

Goal 1: Academic Vocabulary Pre-test and Post-test
Using the **word map** format, administer a pre-test and post-test over at least five new academic vocabulary words in a unit of study of your choosing.

Goal 2: Implement Two "Something Old, Something New" Vocabulary Strategies BEFORE, DURING, and AFTER a reading assignment
Develop a series of class lessons where you teach academic vocabulary using the "Something Old" strategy, **Semantic Feature Analysis (SFA)** AND the "Something New" strategies, **Concept Maps** (including the **6 Degrees of Separation Game)** in a unit(s) of your choosing. You must have at least one vocabulary learning activity that occurs BEFORE students read your assignments, DURING the time students read your assignments, and AFTER students read your assignments. **Note: Both of these strategies must be used somewhere in your lesson plans.** Be sure to complete a GRID like the one below showing which vocabulary-learning activities you have selected for BEFORE, DURING, and AFTER students read the required text(s).

	STRATEGIES Which vocabulary strategies will you use BEFORE, DURING, & AFTER the reading assignment?	***UNIT*** What is the unit or topic area you will use?	***SPI***	***DIFFERENTIATE INSTRUCTION*** What are the multi-level materials you will use for Struggling Readers?	***INTEGRATED PROJECT PLAN (IPP)*** Explain how this unit might be integrated with another core subject class.	***GROUPING*** What grouping strategies will you use with your students?	**ASSESS-MENT** **What do you hope to see students doing** as they complete each strategy?
BEFORE Reading the Text							
DURING the Reading of the Text							
AFTER Reading the Text							

Evidence Guide- This semester the literacy coaches will use the following tool, or a similar version, to guide their observations. Be sure your lesson plans address these areas.

Categories	Evidence
Introduce the Strategy	
Teacher Modeling of the Strategy(s)	
Guided Practice	
Independent Use of the Strategy	
Differentiated Instruction (i.e., small group, cooperative groups, students working in pairs)	
Revisit the Strategy (after a period of time to check for retention, e.g., 4 weeks later)	
Student Assessment (What you hope to see students doing as they use the strategy)	

1 Before 2 During 3 After

CAP #1: Teacher – Literacy Coach Conferences Documentation

Vocabulary Instruction: BEFORE, DURING, AFTER Reading

Teacher: _____

Subject Area: _____ **School:** _____

Activity	Date	Coach's Signature
Attended CAP Modeling/Discussion Session led by the Literacy Coach(es) about implementing word maps for pre- and post-test vocabulary assessment		
Lesson Plan Discussed with Literacy Coach Prior to Teaching (Must include SFA and 6 Degrees of Separation Game at least one time each in the unit)		
Literacy Coach Observes Teaching Rehearsal		
Debrief with Literacy Coach/Revise Lesson Plan as Needed		
Performance Teaching Observed by Literacy Coach		
Final Debrief with Literacy Coach		
EXTRA CREDIT OPTION: Was "Classroom Blogging" attempted in at least one class?	YES	NO

Memphis Content Literacy Academy
Instructor's Outline
Session 1

"Something Old, Something New"

INCREASING VOCABULARY KNOWLEDGE

Semester 3, Fall 2009

From the syllabus...

Session/ Date (week)	Tentative Topics and Classroom Action Plans (CAPs)*	Assignments & Other Critical Information
Session 1 September 1, 3	**"Something Old, Something New"** **<u>INCREASING VOCABULARY KNOWLEDGE</u>** PART I: Course Introduction & Syllabus Review PART II: **TEACHING TACTIC/CONCEPT** Strategies to help students learn ***BEFORE-, DURING-*** and ***AFTER*** reading academic text assignments PART III: **BUILDING VOCABULARY** "Something Old": *Semantic Feature Analysis* (SFA); *Word Maps* (as an "assessment tactic") "Something New": ***Concept Maps;*** ***6 Degrees of Separation Game*** PART IV: Introducing Classroom Action Plan #1	1. **Identify a Unit of Study for CAP #1** (should be one coming up in a few weeks). 2. From the unit you have chosen for CAP #1, **select five (5) "non-negotiable" words/concepts** you feel all your student *must* learn and bring these to Session 2.

College of Education Norms

- I take 100% responsibility.
- I seek equity of voice.
- I am willing to talk about sensitive issues.
- I listen for understanding.
- I appreciate the strengths and contributions of others.
- I bring positive energy and encouragement to the class
- I am a professional and my actions reflect that role.

INSTRUCTOR NOTES	*SESSION SEQUENCE & NEEDED MATERIALS*
WELCOME & INTRODUCTION ***POWERPOINT SLIDE #1 (FOLDER INFO.)*** ***POWERPOINT SLIDE #2*** (You might draw attention to the phrase on Slide 2, "Research for America's Schools" and MCS has an opportunity to "teach the nation" about good instructional practices) ***"AFRICA VIDEO" OPTION*** (Example of a 'community' effort in jazz singing, **Perpetuum Jazzile**, from an Eastern Block country)	**Materials Needed:** 1. New student **folders** to be completed with contact information. 2. **Name cards and markers** (if you feel they will be needed. 3. Copies of the **Fall 2009 course syllabus**. 4. **Option:** See video performance **"Africa"** explained below. This can be very **motivational** to the group discussion. **Procedure:** 1. **Welcome** everyone back 2. **Ask participants to fill in the contact information** in their folders as indicated in the first slide of the PowerPoint presentation. 3. **Discuss the Fall 2009 course syllabus** and upcoming topics. 4. **Explain that a theme** for this first semester is **"Something Old, Something New**." We will be revisiting some strategies from last year and using them in new ways (**something old**), and well as trying our some new teaching strategies and tactics (**something new**). 5. Focus on the class norms and emphasize and focus on what it means to be **a community of scholars working together**, and we value **equity of voice**. What might these norms look like in our class? Can we create that same kind of feeling with our students? **INTERNET VIDEO OPTION: If you can project the Internet in your classroom (using your computer and the projector), show the "Africa" video found on this website as an example of a "community" working together with their simple God-given gifts to create some wonderful:** **http://www.youtube.com/watch?v=yjbpwlqp5Qw&feature=related** **Note: This video features a group of singers called Perpetuum Jazzile** from that performs jazz and popular music. The choir uses a wide spectrum of jazz styles, performing complex and dense harmonies.
KEY QUESTIONS FOR OUR DISCUSSION:	**PPT Slide #3: Introduces Professor William Tate, former president of the American Educational Research Association**

Why are we here? ***Is there really a need for MCLA?*** ***If so, what is the need?*** ***PowerPoint Slides: 3-8*** *In these slides we share with Cohort 2 excerpts from* ***Dr. Bill Tate's keynote address*** *to the first cohort of MCLA. They vividly explain* ***the status of Memphis students, reasons for*** *helping our students stay in school, and their earning potential in life* if they graduate from high school.	**(AERA), the top research organization in the education profession.** **Dr. Tate gave this keynote speech to the FIRST COHORT of MCLA.** **PPT Slide #4: Discuss briefly the GRADUATION rates in large city school districts. For example, Detroit only graduates about 22% of its students! The best of the district's notes graduate well less than 50% of their students.** **PPT Slide #5: This slide shows the dropout rates in MEMPHIS. Notice that the dropout rate reported for Memphis is only for seniors. MOST DROPOUTS OCCUR WELL BEFORE THE SENIOR YEAR IN MIDDLE SCHOOL AND EARLY IN HIGH SCHOOL. The Memphis dropout rate, therefore, is much higher (about 45-50% overall). WE ARE LOSING TOO MANY YOUNG PEOPLE…** **PPT Slide #6-7: A POWERFUL MESSAGE—**Students who graduate high school on average earn over $1.2 million dollars in their life time, and about double that if they get a college degree! **PPT Slide #8: "Good teaching matters"** was Dr. Tate's conclusion. Here he shares examples from research in the Dallas schools.
BRIEF DISCUSSION about Dr. Tate's presentation	**Ask your participants to discuss with an "elbow partner" the BIG IDEAS from Dr. Tate's presentation. After a few minutes, ask people to share their observations with the class.**
OUR PLAN OF ACTION TO HELP STUDENTS SUCCEED: Increase KNOWLEDGE, CAPACITY, FIDELITY	**PPT Slide # 9: This slide points out that we have three main goals this year in MCLA:** 1. **KNOWLEDGE:** To increase our knowledge about key strategies and tactic s for planning instruction that will increase student learning in the core subject areas. 2. **CAPACITY:** Capacity means "**expertise**." Our goal is to improve even more on selected strategies we learned last year, and develop NEW expertise using research-based teaching strategies. A big part of our challenge is to move from outdated and ineffective "traditional" teaching to more progressive and research-based practices that are proven to help urban students. Some of our colleagues, when it comes to changing how we teach, might say "If it ain't broke, don't fix it." Our response is, **"If it ain't broke, we BREAK IT!"** That is, we are *BREAKING AWAY* from traditional practice so

	we can more to more effective practices. Can we do this? As President Obama says, **"YES WE CAN!"**
	3. FIDELITY: This goal actually goes along with Goal #2 in that we want to improve how well we use our strategies. In research we call this "fidelity of implementation." **Let's review for a few minutes our TACTICS for improving our teaching.**
TACTICS **MCLA CONTENT LITERACY MODEL**	**PPT Slide # 10: This slide shows our "Content Literacy Model" we have developed for MCLA. Note that the three (3) key strands we will focus upon are:** **Fluency** (reading at appropriate speeds for the kind of materials students are asked to read for assignments) **Vocabulary and Concept Development** (the special language of our core subject area that helps students become "math literate, science literate, and so forth) **Comprehension of content reading** (because if students do not understand what they are reading in our core subject areas, they cannot succeed) **KEY IDEA: All planning for instruction should include these three components…**
	PPT Slide # 11: This slide re-introduces the **theories behind our teaching choices**. It offers a famous quote in the research world—"**There is nothing so practical as a good theory**" (Lewin, 1952).
	PPT Slide # 12: This slide has quotes from Vygotsky who really gives us a justification for our teaching profession. An effective teacher: **Understands the ability of his/her students (learned through assessments),** **Knows from assessment "what the student is ready for next,"** **Offers instruction that allows students to use what they have mastered as a "bridge" to new learning.**
VYGOTSKY	**PPT Slide # 13:** This slide summarizes Vygotsky's **zone of proximal development** or **ZPD**. It shows that the "**sweet spot**" for teaching and learning lies between what a student can already do competently on their own, and that which is beyond their grasp even if they had help. Out goal is to always teach in our students' ZPD.

ZONE OF PROXIMAL DEVELOPMENT **GRADUAL RELEASE OF RESPONSIBILITY** **BEFORE, DURING & AFTER (BDA)** **Teaching with *VERVE!***	**PPT Slide # 14: TACTICS:** GOING FROM THEORY TO PRACTICE. In this section we briefly summarize two KEY TACTICS we will use all year: **gradual release of responsibility** and strategies we want students to use **BEFORE, DURING, & AFTER** reading a core subject area assignment. **PPT Slide # 15:** Discuss briefly this slide showing what teaching using a **gradual release of responsibility** looks like. Note the changing responsibilities of the teacher and student. Explain that, like last year, our **Classroom Action Plans** of "CAPs" will be structured to help us provide students with learning experiences using **gradual release of responsibility.** **PPT Slide # 16-19:** **Introducing** the idea of helping students begin using certain strategies **BEFORE, DURING, & AFTER** they read a subject area assignment. The next few slides explain the benefits to students and their learning. **PPT Slide # 20-24:** **Introducing** a new goal of increasing VERVE in the classroom and taking advantage of students' preferred learning "style." These slides share research on African-American students and how teachers should consider learning activities that take advantage of VERVE to create **VERVE-ACIOUS classrooms**. **PPT Slide # 25-26:** Introducing the idea of using **communalism** in our learning activities to encourage discussion among students about what they are learning—a Vygotskian belief we operationalize through CREDE tactics to create a **community of learners** with our middle schoolers. **PPT Slide # 27:** Concluding PPT slide.

Do the impossible? Yes we can! Yes we WILL!	
STRATEGY OVERVIEW **BUILDING VOCABULARY** ***"Something Old"*** *Semantic Feature Analysis* (SFA); *Word Maps* (as an "assessment tactic") ***"Something New"*** *Concept Maps;* *6 Degrees of Separation Game*	
CAP #1 **"Something Old"** • **Word Maps used for ASSESSMENT** • **Semantic Feature Analysis (SFA)** **"Something New"** • **Tactic: BEFORE, DURING, AFTER** • **Concept Maps** • **6 Degrees of Separation Game** • **OPTIONAL: Classroom Blogging** **Distribute and Discuss**	**Distribute CAP #1** and allow students time to read it over. **Then, ask students to "retell" the main expectations of CAP #1 to an "elbow partner" and write down any questions for the instructor.** **Have a whole group question and answer session** to clarify the expectations. Be sure to remind them that we will have three class sessions to prepare for CAP #1 before they start working with their Literacy Coaches on their plans.
About the key strategies in CAP #1… **PowerPoint Slides: 28-36**	**In these slides you will review the "Something Old" strategies first.** **Be sure to note the NEW uses (ASESSMENT for "word maps") and THINKING (SFA- BEFORE, DURING, or AFTER students read) with these strategies.** **In the "Something New" strategies we introduce concept maps, and leave them wondering until next week about the "6 degrees game" and the classroom blogging strategy.**
HOMEWORK ASSIGNMENT: **PowerPoint Slide: 37**	1. **Identify a Unit of Study for CAP #1** (should be one coming up in a few weeks). 2. From the unit you have chosen for CAP #1, **select five (5)**

	"non-negotiable" words/concepts you feel all your student *must* learn and bring these to Session 2. TIP: Next week we will show them (briefly) how to do a "content analysis" to determine the non-negotiable FACTS, CONCEPTS, and GENERALIZATIONS in the unit they have selected. You might want to briefly discuss this idea for them to consider when choosing their five words/concepts. These should be IMPORTANT concepts any educated middle schooler should know (instead of extremely unusual ones we all seem to forget…).
Class Evaluation & Reflections	**NOTE: IF YOU HAVE NEWCOMERS TO MCLA, YOU WILL NEED TO EXPLAIN HOW WE EVALUATE EACH CLASS MEETING.** **Class Evaluation**- Distribute the class evaluation sheet to all students and ask them to complete it and place in the envelope provided. They should not put their names on the evaluation. **Reflections**- Ask students to write 3-4 sentences in which they reflect upon what they learned and did in today's class session. They should place their reflection in their folder and drop it off on the way out. This is their "ticket out" each class session.

GOOD LUCK WITH YOUR CLASS!!!

MY REFLECTIONS ON THIS CLASS SESSION:

Signature/Date _____

Classroom Action Plan (CAP) #1 – Fall 2009
Vocabulary Instruction: BEFORE, DURING, AFTER Reading

Name_____**School**_____

Subject Area/Grade Level _____ **Date Assigned: September 1/3**

Due: At your class meeting on September 29/October 1

Directions: Develop lesson plans and execute your CLASSROOM ACTION PLAN (CAP) for your academic classes. Note: Please have your Literacy Coach(es) sign and date each stage of your CAP implementation.

Implementation Goals:

Goal 1: Academic Vocabulary Pre-test and Post-test
Using the **word map** format, administer a pre-test and post-test over at least five new academic vocabulary words in a unit of study of your choosing.

Goal 2: Implement Two "Something Old, Something New" Vocabulary Strategies BEFORE, DURING, and AFTER a reading assignment
Develop a series of class lessons where you teach academic vocabulary using the "Something Old" strategy, **Semantic Feature Analysis (SFA)** AND the "Something New" strategies, **Concept Maps** (including the **6 Degrees of Separation Game)** in a unit(s) of your choosing. You must have at least one vocabulary learning activity that occurs BEFORE students read your assignments, DURING the time students read your assignments, and AFTER students read your assignments. **Note: Both of these strategies must be used somewhere in your lesson plans.** Be sure to complete a GRID like the one below showing which vocabulary-learning activities you have selected for BEFORE, DURING, and AFTER students read the required text(s).

	STRATEGIES Which vocabulary strategies will you use BEFORE, DURING, & AFTER the reading assignment?	***UNIT*** What is the unit or topic area you will use?	***SPI***	***DIFFERENTIATE INSTRUCTION*** What are the multi-level materials you will use for Struggling Readers?	***INTEGRATED PROJECT PLAN (IPP)*** Explain how this unit might be integrated with another core subject class.	***GROUPING*** What grouping strategies will you use with your students?	**ASSESS-MENT** **What do you hope to see students doing** as they complete each strategy?
BEFORE Reading the Text							
DURING the Reading of the Text							
AFTER Reading the Text							

Evidence Guide- This semester the literacy coaches will use the following tool, or a similar version, to guide their observations. Be sure your lesson plans address these areas.

Categories	Evidence
Introduce the Strategy	
Teacher Modeling of the Strategy(s)	
Guided Practice	
Independent Use of the Strategy	
Differentiated Instruction (i.e., small group, cooperative groups, students working in pairs)	
Revisit the Strategy (after a period of time to check for retention, e.g., 4 weeks later)	
Student Assessment (What you hope to see students doing as they use the strategy)	

1 Before **2 During** **3 After**

CAP #1: Teacher – Literacy Coach Conferences Documentation

Vocabulary Instruction: BEFORE, DURING, AFTER Reading

Teacher: _____

Subject Area: _____ **School:** _____

Activity	Date	Coach's Signature
Attended CAP Modeling/Discussion Session led by the Literacy Coach(es) about implementing word maps for pre- and post-test vocabulary assessment		
Lesson Plan Discussed with Literacy Coach Prior to Teaching (Must include SFA and 6 Degrees of Separation Game at least one time each in the unit)		
Literacy Coach Observes Teaching Rehearsal		
Debrief with Literacy Coach/Revise Lesson Plan as Needed		
Performance Teaching Observed by Literacy Coach		
Final Debrief with Literacy Coach		
EXTRA CREDIT OPTION: Was "Classroom Blogging" attempted in at least one class?	YES	NO

Coaching Daily Activity List

Coach:
Date:
School Site:

During Class Time
- **Observed teachers (provided onsite assistance through observation coaching) (#1)**
- **Demonstrated/Modeled CAP Lessons with MCLA participants and students (#2)**
- **Videotaped teachers (#3)**
- **Assisted teachers in other capacities (team taught, provided instructional or admin support) (#4)**
- **Other_____**

Helped Teachers Prepare for Class (Instructionally) (#5)
- **Make/wrote teacher-requested lessons, or created lesson plans**
- **Gathered materials for teachers' lessons**
- **Make/wrote CAP lessons**
- **Other_____**

Trained or Met with Teachers (#6)
- **Conferenced with teachers (e.g., reviewed CAPs, held planning mtgs, trained in use of CRC)**
- **Gave feedback/support for teachers completing CAP**
- **Provided individual professional development as needed to MCLA participants**
- **Other_____**

Attended Coaching Professional Development (#7)
- **Participated in MCLA team planning/professional development events (off site), mentor mtgs, other**
- **MCLA events, curriculum and instruction coach meetings**
- **Read research and standards for Reading Specialists and Coaching**
- **Other_____**

Performed coaching Administrative Tasks (related to MCLA) (#8)
- **Maintained/managed the Curriculum Resource Center (CRC)**
- **Ordered supplies**
- **Scheduled meetings, provided teacher with materials/supplies, emailed/corresponded, photocopied**

Performed Non-MCLA School-related Tasks (#9)
- **Assisted with TCAP activities or other (non-ITBS) testing, served as a substitute**
- **Attended faculty meetings, attended rallies, homecomings, assemblies, math and science nights, worked in bookstore, etc.**

Performed MCLA-related School Tasks (#11- not #10)
- **Met with Instructional Facilitator/PDSCC**
- **Visited with principal or other administrator to inform them of teacher needs**
- **Helped with teacher MCLA recruitment**
- **Other_____**

Striving Readers Evaluation Tasks (#10)
- **Prepared ITBS, assisted with Read 180 randomization, participated/collected surveys/interviews, assisted with the accuracy of data, met with RBS/Edvantia, etc.**

Conducted MCLA evening course tasks (#12)
- **Worked with lead MCLA instructors to deliver weekly course content**

99 = Other, fits no category

Analysis of MCLA Teachers' Weekly Implementation of Literacy Strategies in Fall 2009

As part of the evaluation of the Memphis Striving Readers Project (MSRP), RBS examined how often MCLA teachers used specific literacy strategies and whether content area teachers selected different strategies for implementation. In fall 2009, RBS collaborated with MCLA instructors to administer a Weekly Implementation of Literacy Activities (WILA) checklist to teacher participants. Survey items were culled from the Innovation Configuration Map developed by the MSRP grant team and reflected some of the activities that MCLA developers identified as crucial to successful classroom literacy integration. Each week, teachers were asked if they had engaged in the following eight activities in the past seven days:

- Put students into cooperative groups with assigned roles
- Informally assessed their students' use of an MCLA strategy
- Pre-assessed their students' content knowledge
- Met with literacy coach at school
- Formally assessed their students' use of an MCLA strategy
- Met with grade-level, content-area colleagues during the school day to integrate literacy instruction into lessons
- Received feedback from an administrator with regard to literacy integration
- Used an MCLA strategy in their classroom in the past week

The first WILA survey was administered during the third week of the MCLA class to allow time for exposure to, and adoption of, the new strategies. Participants completed the weekly survey six additional times in their content-specific MCLA class (i.e. social studies, science, mathematics, and English/language arts, or ELA). Instructors collected the surveys and returned them to RBS for data entry and analysis.

All 93 (100%) MCLA participants in the fall completed at least one survey over the six-week period, however, most respondents completed five (32.3%), six (22.6%), or seven (11.8%) checklists over time. One-third (33.3%) of respondents completed four or fewer checklists. Of all the respondents who completed at least one survey, 28 (30.1%) participated in the ELA content class, 23 (24.7%) were in the mathematics class, 30 (32.3%) were in social studies, and 12 (12.9%) were enrolled in the science MCLA course.

The analysis of checklist responses addresses the following research questions:

- To what extent do teachers report engaging in literacy-related activities in the past week? With what frequency do teachers report performing the activities?
- To what extent is there an increase in the frequency of activities over time?
- Are there differences in activity engagement by content area?

RBS measured the change in respondents' reported engagement in activities over the nine-week course, and restricted the analysis to the responses of 77 participants who completed checklists frequently enough to allow for a comparison of

results at three different time points. More specifically, RBS analyzed the responses of teachers who completed checklists at either weeks three or four (baseline), five or six (midterm), and weeks eight or nine (follow-up)[1].

Overall, the analysis found the following:

- Most respondents in fall 2009 reported a very similar number and type of literacy activities each time they completed the checklist
- No meaningful differences emerged among teachers by content areas in the number or type of activities reported
- Teachers were least likely to report having received feedback from an administrator in the past week: 14.3 percent of the 77 respondents reported receiving feedback at baseline, 23.4 percent received feedback at midterm, and 24.7 percent received feedback at follow-up

Teachers' Self-Reported Literacy Activity

Table 1 summarizes the number and percentage of the 77 respondents who reported that they engaged in activities in the past seven days at baseline, midterm and follow-up. At baseline, respondents were most likely to report that they had put students into cooperative groups with assigned roles (83.7%), that they had informally assessed their students' use of an MCLA strategy (81.4%), and pre-assessed their students' content knowledge (76.7%). Receiving feedback from an administrator was the least frequently activity reported by teachers at each of the three time points.

RBS conducted an analysis of variance (ANOVA) to determine whether the average number of activities reported by each teacher (between zero and eight) was statistically different at the three different time points. The test revealed no statistical difference in the average number of activities reported by the 77 teachers at the different time points. In other words, there was not a significant change over time with regard to the aggregate number of activities reported, in either direction (significance of the F-statistic was .712).

Overall, there were no significant changes in the teachers' reported literacy activities emerged over time. Results indicate that only two of the eight activities were reported at significantly higher rates over time: meeting with literacy coach ($p<.05$) and pre-assessing the student content knowledge ($p<.05$). However, a detailed analysis of the distribution of responses suggested interesting patterns across the individual teachers. For example, most teachers reported a similar number of literacy activities each time they completed the checklist. Some teachers consistently reported a low number (between 0 and 4) of activities; a second group reported a medium number (3 to 5) of activities; a third group consistently checked off most of the activities (6 to 8).

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[1] RBS chose this approach because restricting the analysis to checklists completed at weeks four, six, and eight by the same individual limited the sample size to 46 teachers.

Only a small number of respondents submitted checklists that varied noticeably in the number of activities reported.

Table 1
MCLA Respondents' Reported Engagement in Literacy Activities in the Past Seven Days
Fall 2009 (N = 77)

	Baseline		Midterm		Follow-up	
	#	%	#	%	#	%
Put students into cooperative groups with assigned roles	56	72.7	50	64.9	50	64.9
Informally assessed their students' use of an MCLA strategy	52	67.5	50	64.9	49	63.6
Pre-assessed their students' content knowledge	54	70.1	43	55.8	58	75.3
Met with literacy coach at school	34	44.2	57	74.0	58	75.3
Formally assessed their students' use of an MCLA strategy	20	26.0	27	35.1	58	75.3
Met with grade-level, content-area colleagues during the school day to integrate literacy instruction into lessons	39	50.6	42	54.5	42	54.5
Received feedback from an administrator with regard to literacy integration	11	14.3	18	23.4	19	24.7
Used an MCLA strategy in their classroom in the past week	44	57.1	46	59.7	42	54.5

To investigate the extent to which teachers tended to report the same number (and type of) of activities across the semester, RBS counted the number of teachers who provided three or more identical ratings on their weekly surveys. Of the 62 teachers who reported five or more total activities (the maximum was seven), 30 (48%) had identical responses at least three times over the course of the survey period. Since teachers were asked to complete the checklist weekly, it is not surprising that individual responses were stable over time. The reader is encouraged to consider data from other sources before drawing inferences based solely on these data.

Content Area Differences

RBS analyzed responses to the question asking respondents if they had used an MCLA strategy in the past week; Chi Square findings show no differences by MCLA professional development content area in self-reported literacy strategy use. More specifically, no significant differences emerged at baseline, midterm, or follow-up among the 77 teachers with matched reports by content area.

A review of the type of activities reported at the three time points showed no differences by content area, except in two areas: at midterm, a smaller proportion (35.7%) of mathematics teachers than other teachers had met in the past week with

colleagues to integrate literacy into class (Chi Square = 1.00, df = 3, p=.018). Approximately 63 percent of ELA teachers, 42.9% of social studies teachers, and all but one of the 11 science teachers reported having met with grade level colleagues during the school day to integrate literacy instruction into the lesson. At follow-up, the proportion of science teachers who met with a literacy coach in the past week (36.4%) was smaller (Chi Square = 1.34, df = 3, p=.004) than for ELA teachers (87.5%), social studies (85.7%), and mathematics teachers (64.3%). No other content area differences emerged across the three time points with respect to the type of activity reported.

Specific Strategies Reported

RBS also asked respondents if they used an MCLA strategy in the past week and if so, to provide the strategy's name or a description. Teachers often listed more than one strategy that they had used in the previous week. Table 2 shows the number of times a strategy was reported across all 93 MCLA participants' checklists, in descending order. The three strategies that appeared most often among the teachers' responses were the Frayer model, choral reading, and the concept map.

Table 2
Individual MCLA Strategies Listed on Weekly Checklists, Fall 2009 (N = 93)

Strategy	Count	Strategy	Count
Frayer model	70	Academic reading	1
Choral reading	60	Achieve	1
Concept map	55	Assessments	1
SFA	51	Bingo	1
Word wall	32	CAD 1	1
THIEVES	23	Character Analysis	1
Word map	20	Classroom blogging	1
Six degrees of separation	11	Cooperative learning	1
Graphic organizers	8	Cornell notes	1
Starburst	8	Flow chart	1
Analogies	7	Fluency	1
LEARN	7	Gallery walk	1
Word sort	7	Grid analysis	1
Blog	6	Hierarchy	1
Reader's theater	6	Joint productive activity	1
Echo reading	5	KWL	1
Neurological Impress Method	5	Mathematics	1
Spider map	5	Peer tutoring	1
Thinking maps	5	Poem for two voices	1
QAR	4	Read aloud	1
Vocabulary	4	Scooping	1
Bubble map	3	Semantics	1
Question stems	3	Six-steps	1
Venn diagram	3	Summary chart	1

Antiphonal reading	2	Taboo	1
Cloze reading	2	Theater	1
Fix-up	2	T-diagram	1
SEARCHES	2	Tree map	1
Verve-acious classroom	2	Unison reading	1
Vocabulary map	2	Wicker writing	1
		Wonder wall	1
		Word cards	1
		Word game	1
		WWII	1

Data source: Fall 2009 WILA

Table 3 shows the number of teachers at midterm reporting specific strategies by content area. The number of teachers in each MCLA content area is: 24 ELA, 14 mathematics, 28 social studies, and 11 science. The number of teachers reporting a strategy does not total the number of teachers in a particular content area because teachers sometimes wrote that they used more than one strategy in the previous week.

Table 3. Specific Strategies Listed by Teachers at Midterm by Content Area

ELA	4	Frayer model
	2	Word Map
	3	Six Degrees of Separation
	1	Choral Reading
	2	SFA
	1	Graphic Organizers
	1	Hierarchy
	1	Word Wall, Word Game
Math	2	Frayer model
	5	Word Map
	4	Choral Reading
	3	Word Wall
	1	Concept Maps
Social Studies	6	Frayer model
	1	QAR
	1	THIEVES
	6	Choral Reading
	1	Antiphonal reading
	1	Graphic Organizer (e.g., sunburst)
	3	SFA
	1	Flow Chart
	3	Concept Map
	3	Word Wall
	1	Cornell Notes
	1	Thinking maps
	1	Taboo
Science	1	Frayer Model
	2	Word Map
	2	THIEVES

Name _____

PLEASE CHECK THE BOX IF THE STATEMENT IS TRUE FOR YOU.

IN THE LAST SEVEN DAYS, I HAVE:

☐ Put students into cooperative groups with assigned roles.

☐ Informally assessed my students' use of an MCLA strategy.

☐ Pre-assessed my students' content knowledge.

☐ Met with a literacy coach at school.

☐ Formally assessed my students' use of an MCLA strategy.

☐ Met with grade-level, content-area colleagues during the school day to integrate literacy instruction into lessons.

☐ Received feedback from an administrator with regard to literacy integration.

Used an MCLA strategy in a content class.

☐ If YES, Which strategy/ies? _____

(If applicable) ***To what extent did you help students with the MCLA literacy strategy?***

___ I helped them a great deal

___ I helped them a little

___ I didn't help them at all because they used it independently

___ other: _____

MCLA Participant Survey

Research for Better Schools (RBS) continues to evaluate the MCLA program. Please take a few minutes to complete this survey. Contact Ms. Kelly Feighan at RBS (215-568-6150, ext. 285) with any questions.

1. School: O American Way O Corry O Hickory Ridge O Lanier

2. Teaching area: O ELA O Mathematics O Science O Social Studies O Other: _____

3. Participated in MCLA for: O All 4 semesters O 2 or 3 semesters O 1 semester

To what extent do you agree or disagree with the following statements? (Please check a bubble.)

Participating in MCLA…	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
4. helped me integrate literacy activities **more often** into my lesson plans than before I participated in MCLA.	O	O	O	O	O
5. resulted in **more conversations** with colleagues about integrating literacy into my content area.	O	O	O	O	O
6. did not make much of a difference in my teaching.	O	O	O	O	O
7. caused me to use literacy strategies more effectively in my content classes.	O	O	O	O	O
8. helped improve my **students' understanding** of course content.	O	O	O	O	O
9. was useful; however, **competing demands prohibit frequent use** of the strategies I learned in MCLA.	O	O	O	O	O

10. How satisfied were you with the **amount of modeling of strategies** (from beginning to end) in a typical MCLA evening class this past semester?

O Not at all satisfied O Somewhat satisfied O Satisfied O Highly satisfied

11. About how often did you "work with" your MCLA literacy coach this year? By "work with" we mean, **have a meeting**, **discussed or created a CAP** together, or **collaborated** in some other way.

O Never O Rarely O Sometimes O Often O Every week

12. To what extent do you agree or disagree that *your students* do the following, AS A RESULT OF YOUR MCLA PARTICIPATION?

	Strongly Disagree	Disagree	Agree	Strongly Agree
a. use MCLA strategies with my assistance.	○	○	○	○
b. work with peers to use MCLA strategies when directed to do so.	○	○	○	○
c. use MCLA strategies independently when directed to do so.	○	○	○	○
d. work cooperatively in small groups.	○	○	○	○
e. assume responsibility for assigned roles within their small groups.	○	○	○	○

13. Please check the response below that best represents how you feel about working with the MCLA literacy coach:

	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
a. Overall, I found the MCLA coach's advice to be helpful.	○	○	○	○	○
b. The MCLA literacy coach was willing to help me when I requested help.	○	○	○	○	○
c. I don't think my MCLA literacy coach really understood what it was like to teach the content I teach.	○	○	○	○	○

14a. How often have you used the MCLA Curriculum Resource Center? (This is the **area in your school that houses materials provided by the program. The resources may have been stored in the library, a coach's office, or in another room**).

○ Never ○ Once ○ 2 - 4 times ○ 5 - 7 times ○ 8 or more times

b. If you've used materials from the "CRC," to what extent did they **help students meet content area objectives**?

○ Did not help at all ○ Helped a little ○ Helped ○ Helped a lot

c. To what extent **did you select the CRC materials** to help **motivate** students to read?

○ Not at all ○ A little ○ A great deal

15. Thinking about MCLA activities at your school, how often did your PRINCIPAL do the following?

	Never	Every other month	At least once monthly	At least twice monthly	At least once weekly
communicate a belief that literacy instruction is important for improving student achievement in the content areas	○	○	○	○	○
express the expectation that teachers work with literacy coaches to support classroom implementation of MCLA strategies	○	○	○	○	○
conduct walkthroughs to see my MCLA implementation	○	○	○	○	○
provide feedback regarding my implementation of literacy strategies	○	○	○	○	○

16. How often (if at all) during this school year have you used the following? (If you select "1 to 2 days per week" or more often, please also indicate in what percentage of classes you used the item).

A. Used the adopted **textbook** to help students read and learn content

○Almost never	○At least once per month	○1 to 2 days per wk	○At least 3 days per wk
		In what percentage of classes? ○ 25% ○ 50% ○ 75% ○ 100%	In what percentage of classes? ○ 25% ○ 50% ○ 75% ○ 100%

B. Used materials from the MCLA **"CRC" library** (e.g., *National Geographic*, *Picture It!,* etc)

○Almost never	○At least once per month	○1 to 2 days per wk	○At least 3 days per wk
		In what percentage of classes? ○ 25% ○ 50% ○ 75% ○ 100%	In what percentage of classes? ○ 25% ○ 50% ○ 75% ○ 100%

C. Used any **MCLA supplementary materials** appropriate for students' reading levels

○Almost never	○At least once per month	○1 to 2 days per wk	○At least 3 days per wk
		In what percentage of classes? ○ 25% ○ 50% ○ 75% ○ 100%	In what percentage of classes? ○ 25% ○ 50% ○ 75% ○ 100%

D. Used materials from **other sources** (e.g., online, colleagues, libraries)

○Almost never	○At least once per month	○1 to 2 days per wk	○At least 3 days per wk
		In what percentage of classes? ○ 25% ○ 50% ○ 75% ○ 100%	In what percentage of classes? ○ 25% ○ 50% ○ 75% ○ 100%

E. Used **cooperative learning** activities as part of lessons

○Almost never	○At least once per month	○1 to 2 days per wk	○At least 3 days per wk
		In what percentage of classes? ○ 25% ○ 50% ○ 75% ○ 100%	In what percentage of classes? ○ 25% ○ 50% ○ 75% ○ 100%

Feel free to write any parting comments below about your time in MCLA.

THANK YOU VERY MUCH!

Memphis Striving Readers Project: MCLA Classroom Observation Protocol

Observer: _____ Obs. Date: _____ /_____ / _____ Class length: _____ minutes

School: _____Teacher name/gender: _____ ☐ Female ☐ Male

Was pre-obs. interview conducted prior to observation? ☐ Yes ☐ No [*Admin only: ID* = _____]

Class grade & content area: ☐ 6th ☐ 7th ☐ 8th | ☐ ELA ☐ Math ☐ SS ☐ Science ☐ Other_____

Adult present other than the classroom teacher? ☐ Yes ☐ No [If Yes, note his/her role: _____]

No. students in class 15 min. into observation: _____ [# girls: _____ # boys: _____] # of non-black students: _____

Textbook: _____ Was it used in class? ☐ Yes ☐ No

Observation Codes: *Please record the MCLA strategy code, instructional code, and level of engagement code observed in 10-minute intervals. If no literacy strategy is used, write "NLS." If no instructional code is appropriate, write "NIC."*

	Interval 1	Interval 2	Interval 3	Interval 4
Interval start & end times →	: – :	: – :	: – :	: – :
MCLA strategy(ies)				
Instructional code(s)				
Cognitive demand code(s)				
Level of engagement LE = low (≥80% of students off-task) ME = mixed HE = high (≥80% of students on-task)				

MCLA Priorities: *Check the box that best represents what you observed. Be sure to include in your fieldnotes an explanation of your selection.*

1) Degree of students' independent use of MCLA strategies:

☐ Students exhibit, when appropriate, independent and integrated use of multiple strategies.
☐ Students can self-select a strategy and use it independently.
☐ Students demonstrate independent use of the strategy (without teacher or peer assistance) when the teacher tells them to use a strategy.
☐ Students can use strategies with peers (cooperative or collaborative use) when teacher tells them to use a strategy.
☐ Students are aware of the strategy, can somewhat use it but not without some teacher assistance or scaffolding.
☐ Students engage in text-based work without the use of strategies.

2) Student roles and behaviors during cooperative learning activities:

☐ Students have assigned roles, carry out those roles, and exhibit behaviors consistent with class norms for cooperative learning activities (e.g., observing equity of voice, listening for understanding, offering positive feedback, appreciating contributions of others, etc.).
☐ Students have assigned roles but do not carry out roles. Students do exhibit behaviors consistent with class norms for cooperative learning activities (e.g., observing equity of voice, listening for understanding, offering positive feedback, appreciating contributions of others, etc.).
☐ Students are grouped for tasks but do not have assigned roles. Students exhibit some behaviors consistent with class norms for cooperative learning.
☐ Students do not have assigned roles and do not exhibit behaviors consistent with class norms for cooperative learning activities.
☐ There is no evidence that students are grouped in cooperative learning activities. Students work alone.

Memphis Striving Readers Project: MCLA Classroom Observation Protocol

PLEASE REMEMBER TO EMBED ALL MCLA STRATEGY CODES, INSTRUCTIONAL MODE CODES, AND COGNITIVE DEMAND CODES IN FIELDNOTES AS APPROPRIATE.

MCLA Strategy Codes

APR	Activate prior knowledge	JU	Journal or blog use	RTH	Reader's Theater
B	Bubble or double-bubble map	LM	Leveled content materials	RR	Repeated oral reading
CC	Context clue	M	Mnemonic strategies	RT	Retelling/summarizing with guidance
CR	Choral reading/whole group reading	MU	Monitoring understanding	SFA	Semantic feature analysis, maps, word grid
CT	Connecting text to students' lives	OR	Oral retelling	SGQ	Students generating questions
DI	Direct, explicit instruction related to a literacy strategy	PB	Paired or buddy reading	SW	Shared writing
E	Etymology	PT	Preteaching vocabulary	TA	Think aloud
G	Glossary or dictionary use	PV	Previewing text (e.g., THIEVES, LEARN, and SEARCH)	TPS	Think-pair-share
GO	Graphic organizer	Q	Questioning for focus/purpose	TRA	Teacher models/reads aloud passage
GR	Retelling with graphics	QAR	Question-answer relationships/ ReQUEST	WR	Written retelling
IW	Interactive word wall use	REF	Reflection/meta-cognition	WS	Word sorts

Instructional Mode Codes

AD	Administrative Tasks	I	Interruption	RT	Reciprocal teaching
A	Assessment	J	Jigsaw	SGD	Small-group discussion
CD	Class discussion	LC	Learning center/station	SP	Student presentation
DP	Drill and practice (on paper, vocally, or computer)	L	Lecture	TM	Teacher modeling (problem modeling)
D	Demonstration (e.g., science experiment)	LWD	Lecture with discussion/ whole-class instruction	TIS	Teacher/instructor interacting with student
HOA	Hands-on activity/materials	OOC	Out-of-class experience	V	Visualization (picturing in one's mind)
RSW	Reading seat work (if in groups, add SGD)	WW	Writing work (if in groups, add SGD)		

Cognitive Demand Codes

1 **Remember** – Retrieve relevant knowledge from long-term memory (recognize, identify, recall)

2 **Understand** – Construct meaning from instructional messages, including oral, written, and graphic communication (interpret, exemplify, classify, summarize, infer, compare, explain)

3 **Apply** – Carry out or use a procedure in a given situation (execute, implement, use)

4 **Analyze** – Break material into its constituent parts and determine how the parts relate to one another and to an overall structure or purpose (differentiate, organize, attribute, outline)

5 **Evaluate** – Make judgments based on criteria and standards (check, coordinate, monitor, test, critique, judge)

6 **Create** – Put elements together to form a coherent or functional whole; reorganize elements into a new pattern or structure (generate, hypothesize, plan, design, produce, construct)

Annotated Guide to the Memphis Striving Readers Classroom Observation Protocol (MSR-COP)

Prepared for the Evaluation Staff

by

Research for Better Schools

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School Year 2009 – 2010

DRAFT

Annotated Guide to the Memphis Striving Readers Abbreviated Classroom Observation Protocol (MSR-COP)

The purpose of this guide is to provide details about the abbreviated classroom observation protocol (COP) designed by Research for Better Schools (RBS) for use in the federally funded Memphis Striving Readers Project (MSRP). Additional questions or comments about using the protocol can be directed to Dr. Jill Feldman or Ms. Kelly Feighan at RBS (215-568-6150).

It is presumed that if you are reading this manual, then you are a field staff member/observer for the MSRP. As such, you will be assigned to observe classrooms in one of eight participating middle schools. Prior to conducting observations, RBS will provide you with the name and contact information of teachers whose classes you will observe. Where possible, RBS will forward teacher and/or schedules. Since the teacher must sign a consent form prior to the observations, please check with RBS to see if you should e-mail the consent form to your assigned teachers in advance of the visit. Once you have received the schedule and have confirmed that teachers are aware of the upcoming visit, please do the following:

- call and/or e-mail the teacher to express gratitude for his or her participation
- confirm the date and time of your visit
- suggest a time and date for conducting the brief, five-minute pre- observation interview

The pre-observation interview must be conducted prior to the observation so that you have basic information about the lesson and students you will observe.

Pre- and post- observation interviewing

As an observer, you will be assigned to observe a class taught by a current or former participant of the Memphis Content Literacy Academy, a professional development program designed for teachers that promotes literacy integration. Whereas MCLA once targeted only content area teachers, such as mathematics, social studies, science, and English/language arts (ELA), it has since been made available to **all full-time teachers in the participating middle schools**. Occasionally, a *READ 180* teacher also teaches ELA, and the roster you are given may be unclear as to which content class you are observing, so confirm that the class you have been assigned to observed is **not** a *READ 180* class. ***If you are assigned to observe a* READ 180 *class, you must use the protocol that has been designed specifically for observing that program***. Please contact Ms. Debra Coffey at RBS (215-568-6150, ext. 276) for the *READ 180* observation protocol.

If there are a few minutes prior to the start of the class, confirm with the teacher the answers from the pre-observation interview you ideally conducted a day or two before by phone or e-mail (see Appendix). Please remember that it is inappropriate to observe without some basic information about the lesson/group of students that will be observed, so at the very least, try to conduct the pre-observation interview right before class on the day as your visit if you must. The observation should span the entire classroom period.

At the end of each lesson as the change of classes occurs, ask questions from *Form B*, the post-observation interview guide; however, if the teacher does not have time to speak to you at that

moment, ask if you may return during the planning period or another time during the day. The questions will only take about 5 to 7 minutes to answer. E-mails are a last resort.

General Information

Please script what you hear ***particularly when it refers to the use of text or literacy*** when conducting the ten-minute interval observations so that you can go back later and code them. It is important to take very detailed notes about the material being taught, with examples of problems written on the board, questions asked and responses, and sketches of graphic organizers. Write down direct quotes from teachers and students wherever you can to capture them most accurately. Again, while you may refrain from taking detailed notes about disciplinary or administrative issues, or instruction that is not text- or literacy-based, it is especially important to note **any conversation or instruction that turns to literacy matters or the use of text**.

Take the first few minutes of class time to complete some information required on the observation protocol, such as the teacher's name and grade level. Do not burden yourself with coding the protocol's matrix; instead, **focus on taking descriptive notes so that you can code your notes after the observation**. Mark the time often enough so that you can determine the ten-minute intervals, but do not spend so much time marking minutes that curtail your ability to take detailed notes.

Make sure that the start and end of each interval is clearly marked in your field notes. You need not code literacy strategies while you are busy taking notes in class. Focus more on what you see and hear, and less on a code (that you will assign later). This will require that you write down sufficiently detailed information. **Type up or polish your fieldnotes as close in time to the completion of your observations as possible. Use time between classes to fill in gaps in your notes or to type them up. Memory decay increases with each passing hour!**

When you type up your fieldnotes after the observations, include the following **at the end of each time interval**:

- MCLA strategy codes found on the front of the COP (e.g., choral reading)
- Instructional Codes found on the back side of the COP (e.g., lecture)
- Level of Cognitive Demand found on the back side of the COP
- Engagement level found on the front of the COP

Do NOT put this information in text boxes in a margin. Do NOT write up your notes in a table or chart. They should look like this:

1:35 – "Okay, we need to expedite matters," the teacher says. "The word of the week that you see on the wall is metamorphosis (she spells it aloud and sounds it out slowly). I want you to tell me an animal that goes through it." [L/LWD, PT, IW]

MSR-COP: Background information

In addition to including your name and the date on the first page of the protocol, record the teacher's full name after confirming it when you enter or before you leave (one way is to listen

for students calling the teacher by name). Do not assume that you are observing the teacher on the roster (even if your roster includes teachers' names). Determine that he or she is not a substitute teacher. Note any other adults in the room, and inquire about their role when you can. Approximately 15 minutes into your observation, record the number of girls and boys in the class. Since the majority will be African American, record as best as you can the number of students who do not appear to be of African-American descent. Be sure also to check the grade and content level of the class you are visiting. Record the total length of the observation in minutes. Do not count lunch breaks that occur in the middle of the class period in the total length.

COP Matrix

The next section to be completed on the COP is a matrix that asks observers to record time intervals, and codes for MCLA strategies, instruction, cognitive demand, and level of engagement. The following section provides details on each of these dimensions.

MCLA Strategy Codes

APR	Activate prior knowledge	LM	Leveled content materials	RT	Retelling/summarizing with gu
CC	Context clue	M	Mnemonic strategies	RTH	Reader's Theater
CR	Choral reading/whole grou reading	MU	Monitoring understanding	SC	Scooping
CT	Connecting text to students' l	OR	Oral retelling	SFA	Semantic feature analysis, map word grid
DI	Direct, explicit instruction related to a literacy strateg	PB	Paired or buddy reading	SGQ	Students generating questions
E	Etymology	PT	Preteaching vocabulary	SW	Shared writing
FM	Frayer Model	PV	Previewing text (e.g., T.H.I.E.V.E.S/S.E.A.R.C.H.)	TA	Think aloud
G	Glossary or dictionary use	Q	Questioning for focus/purpose	TPS	Think-pair-share
GO	Graphic organizer/thinking map	QAR	Question-answer relationships	TRA	Teacher models/reads aloud pa
GR	Retelling with graphics	REF	Reflection/meta-cognition	WR	Written retelling
IW	Interactive word wall use	RAD	Radio Reading	WS	Word sorts
JU	Journal or Blog use	RR	Repeated oral reading		

Glossary for "MCLA Strategies"

Definitions for MCLA literacy codes are described below, in alphabetical order.

Activating prior knowledge (APR): Any activity in which the teacher asks/discovers what students already know about a topic. This can include having the students complete an anticipation guide, brainstorm as a class, fill out a K-W-L, etc. Usually occurs before reading, but can also occur during reading in what are usually "teachable moments."

Choral reading/whole group reading (CR): This occurs when the entire class reads *connected text* in unison. Reading single words from a list does not count, as the text must be phrases, sentences, paragraphs, etc. Students are usually encouraged to use different vocal inflections.

The passage may be read multiple times. Choral reading may take the following forms: (1) everyone reads in unison with or without the teacher leading; (2) antiphonal reading occurs where one group reads text together and another group follows by reading a different section; (3) one group reads aloud in unison, and another group (defined as two or more individuals) reads the same text selection again ("echo reading").

Connecting text to students' lives (CT): The teacher or students relate the text material to current/commonly known events or experiences in students' lives. Linkages that are made to previously acquired knowledge learned in class must also relate to life experiences in order to qualify. (Simply asking students, "Do you remember our discussion of that last time?" does not count as a connection made to their experiences). This strategy draws from students' real-world experiences and/or knowledge and does NOT merely refer to something learned earlier in the year. Connections may be made about terms, text, concepts, or vocabulary (especially academic word wall examples).

Context Clue (CC): The teacher directs the students to look in the text to infer the meaning of a word. This could include reading the rest of the sentence and figuring out what would make sense, pointing out a similar sentence or reference in the same passage, or directing students to look at an accompanying picture or chart.

Direct, explicit instruction (DI): Deliberate, sequential instruction related to teaching literacy strategies. The steps include (1) **introducing** the strategy to students; (2) teacher **modeling** use of the strategy; (3) **guided practice** in which the students attempt using the strategy with a gradual diminishing of teacher support as students gain competence; and (4) **independent use** of the strategy by students for summative assessment purposes to ensure mastery has occurred. MCLA defines DI as "explain and model" **(see appendix**). If done in groups, add Small group discussion (SMG). DI cannot be coded without a corresponding literacy strategy during that interval. The key in capturing direct instruction is to identify the specific steps being used since it is rare to see all four steps occurring in the same lesson.

Etymology (E): The teacher discusses the history or origin of a word. This often involves identifying bases, or common prefixes and suffixes and their meanings.

Frayer Model (FM): This type of graphic organizer, an adaptation of concept maps, includes the concept word, definition, characteristics of the word, examples, and "non-examples" of the chosen concept word. See the appendix for an example of a Frayer model.

Glossary or dictionary use (G): Students look up unfamiliar words as they are reading (or before or after reading) to find the definition. They can use a glossary provided by the teacher, a glossary in their textbook, a separate dictionary, or an online dictionary. Glossary/dictionary use can occur individually or in groups.

Graphic organizer (GO): A general term for a form of "mapping" or pictorial representation of how concepts/facts in text are connected and organized. Examples of graphic organizers include story maps, semantic maps, bubble maps, K-W-L, character maps, cause-and-effect maps, problem-solution frames, Venn diagrams, and timelines. Graphic organizers might also be called

thinking maps **(see appendix for examples).** Can be done by students at desks or in groups, or by whole class using the blackboard/whiteboard, overhead projector, or other means of technology.

Interactive word wall use (IW): Also called "academic word wall." The word walls should be clearly marked, posted, visible, or presented to students so they have access to the words during related activities, which may include vocabulary games such as hangman or "password." Words should be posted on the wall and easily visible. Use of the word wall would include adding new words or overtly referring to posted words.

Journal or classroom blog use (JU): Students may write in journals or blogs during class. Although journaling is no longer taught in MCLA, you may see it in action. Journal writing is a type of routine where students reflect on content; it is an intellectual diary, rather than random paragraphs recorded on a piece of easily discarded paper. A journal is usually a discrete place or repository such as notebook. In classroom blogging, readers are able to post comments and have online chats facilitated by a host. MCLA participants will learn how classroom blogging can be used without technology by recreating the blog with large sheets of paper, sticky notes, and markers.

Leveled content materials (LM): These are materials written on a variety of reading levels in order to help students with varying abilities gain access to information and increase reading skills. All students in the class will not be reading an identical passage if leveled materials are used. You may need to ask the teacher if this strategy has been used. The main source for leveled reading material in MCLA is the *National Geographic* series. Look for them in class.

Mnemonic Strategies (M): Any strategy designed to aid memorization of a word. It can include making up a rhyme about a word, associating it with a familiar sound or rhyming word, or designing an acronym (such as HOMES for the Great Lakes). The strategy often has little to do with the meaning of the word itself.

Monitoring understanding (MU): Here, the teacher gauges student understanding **of text** by asking specific questions regarding material and by encouraging students to monitor their own understanding of what is being taught. The teacher may ask open-ended questions such as "What do you make of that paragraph?" or "What did you get from that poem?" The cognitive level of his/her questions should be fairly high, rather than simple yes/no questions about facts. The teacher may also instruct students to use meta-cognitive strategies to gauge their own understanding of text (e.g., "Do not forget to use your fix-up strategies"). Overall, monitoring understanding of text can occur **during and after reading**. It does not include general strategies like asking if "there are any questions."

Oral retelling (OR): A post-reading strategy where students summarize or recap what was read. In some instances, students take turns summarize one of the sections (i.e., one student will retell the first section while the other student listens), then they will reverse roles for an oral retelling of the second part of the passage. After each retelling is done, the "listener" should ask the "reteller" questions about anything gleaned directly from the passage. If a graphic organizer is used, code GO.

Paired or buddy reading (PB): Students are paired and both have copies of the text. One student will read aloud as the other follows along, and then they switch roles. Students may rate each other's reading or time each other with a stopwatch. The passage may be read several times. Paired reading begins with one student assuming the role of reader and the other child assume the role of listener, prompter, and responder. The listener's role is as important as the reader's as he/she should provide supportive prompts and feedback when needed. Once one child in the pair finishes reading, the roles reverse.

Preteaching vocabulary (PT): Pre-teaching of vocabulary involves the discussion of a word and its meaning before it is encountered in text. It can involve discussing examples of the word in various contexts and activating prior knowledge. Pre-teaching can occur along with other strategies.

Previewing text (PV): This is generally a prereading strategy designed to increase comprehension. Students work through the text, identifying headings, titles, first sentences in paragraphs or sections, visuals (charts, graphs, pictures, etc.) and captions, summaries, etc. Students might create questions from this previewed material and answer them as they read the text. Includes T.H.I.E.V.E.S (during which students preview **T**itles, **H**eadings, **I**ntroductions, **E**very first sentence, **V**isuals and vocabulary, **E**nd-of-chapter questions, and **S**ummaries) and S.E.A.R.C.H.E.S., a similar technique adapted for use with word problems in mathematics. The T.H.I.E.V.E.S. and S.E.A.R.C.H.E.S. strategies may occur either before or during reading.

Questioning for focus/purpose (Q): Open-ended questions are used to enhance reading comprehension. It can include the teacher asking thoughtful questions about the passage in order to help the students understand the author's point of view or the material being taught. This does not include basic knowledge questions. This is often, but not always, a pre-teaching strategy.

Question-Answer Relationships (QAR): A strategy that can be used to increase comprehension during or after reading or to develop test-taking skills. There are two categories of QAR: *In the Text* and *In my Head.* These two categories are divided into four QAR types. Students are taught to identify the types of questions they are being asked, i.e., whether the answer can easily be found in the text, in words that are both close to and similar to the subject of the question ("Right There"); whether the student will need to think about and find information included throughout the text to answer the question ("Think and Search"); whether the student would need to combine his or her prior knowledge with information from the text ("Author and You"); or whether the student will have to answer the question entirely from his or her prior knowledge ("On my Own"). The teacher and students may use a table to organize their thoughts.

In the Text	In my Head
Right There	Author and You
Think and Search	On my Own

Radio Reading (RAD): Type of reader's theater exercise in which a student reads aloud from a "script," drawn from newspapers, magazines, or any print source that can be converted to a news

story. One students acts as a news anchor, and others act out and read the roles of other news journalists.

Reader's Theater (RTH): Fluency activity in which students read from a script, story, or poem and then share their oral reading with classmates and selected audiences. Students do not memorize the text or use elaborate props and instead present an interpretation of literature read in a dramatic style. If a story has been selected, students are assigned to read characters' parts. If poems are selected for a reader's theater, students may read alternating lines or groups of lines. Reader's theater in the round, in which readers stand around the perimeter of the room and the audience is in the center surrounded by the readers, is a fun and interesting variation for both the performers and audience.

Reflection/metacognition (REF): General term for any strategy during which students are actively stopping to examine whether they understand what they are learning/reading. Teacher may use "think-alouds" and students may discuss what they do when they don't "get it." Metacognitive strategies may use worksheets that direct students to use "fix up" techniques to improve their comprehension of text. This is a largely internal process, so take detailed notes about what is being said and done if you think you are observing use of this strategy.

Repeated oral reading (RR): The same passage is read aloud multiple times (by teacher and/or students) while others follow along. May accompany other strategies. Repeated reading must involve extended text and not simply single words.

Retelling/summarizing with guidance (RT): Students recap or paraphrase what was just read. This includes oral retelling, retelling using graphic organizers, and written summaries of silent or oral (verbal) reading. It can include an entire reading or just a paragraph. Basic summarizing is more general than retelling.

Retelling with graphics (GR): A retelling strategy in which students use a graphic organizer to describe what they understood and remembered about a text. The organizer will usually include spaces for the main idea, key points, supporting arguments or details, but the shapes or structures of the organizers will vary. Retelling with graphics can include drawing a picture of what students understood from text.

Semantic feature analysis, semantic maps, or word grids (SFA): A type of graphic organizer. A chart with topics listed in the left column and features in the top row. Each topic is marked (yes or no; plus or minus) to indicate whether or not the feature is present. See the appendix for a sample SFA.

Students generating questions (SGQ): The students pose questions about the material read or learned, often using question stems provided by the teacher and/or whole class. This is an overt activity in which students are often in groups and told to formulate thoughtful questions, not a spontaneous activity inviting typical student questions.

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Shared writing (SW): teachers and/or students work together to create summaries about readings, or sometimes stories (most often in ELA classes), with the teacher or a student as the scribe. Can be done in pairs, small groups, or as a whole class.

Think alouds (TA): The teacher describes their thinking process to model how a strategy is used. Literally walks students through ("Now I'm thinking that I don't know the word, but I see this part looks familiar…")

Think-Pair-Share (TPS): A cooperative learning strategy. The teacher poses an open-ended question to think about. Students first think on their own about their responses and share their ideas with a partner, before the pairs shares its ideas with the class. Only select if students are grouped in twos.

Teacher models/reads aloud passage (TRA): The teacher reads or uses a model to read the passage fluently. Teacher should (but does not always) emphasize intonation and inflection as well as appropriate speed given the text demands. Students are usually asked to follow along and may re-read the passage afterwards. This refers to the reading of extended text (at least a partial sentence).

Written Retelling (WR): This is a post-reading strategy that asks students to summarize what they have just read. There are two or three steps to this process that may be used (you may see any of these). The first step may be oral reading. Next, the student and/or class will use a graphic organizer (so code GO, too) to identify the facts, concepts, and generalizations from a passage. Then they will write a summary in paragraph form, expanding their generalization into an introduction, writing a paragraph for each concept using supporting facts, and restating the introduction in a conclusion.

Word sorts (WS): Vocabulary activity in which students use new vocabulary (see interactive/academic word wall) to group, discuss, regroup, and discuss important vocabulary in a field of study. They sometimes may create a table (a graphic organizer) based on some common features of the target words. The sorting scheme is often related to the etymology or origin of the words or to their parts of speech.

(Sample Word Sort)
List of Words To Be Sorted (*prefixes:* astro-, bio-, chlor-, eco-, hydro-, hypo-, photo-)

Word Sort

astro-	**bio-**	**chlor-**	**eco-**	**hydro-**	**hypo-**	**photo-**
astrology	biodegradable	chloroform	ecosystem	hydrophobia	hypocrisy	photography
astronomer	biosphere	chlorine	economics	hydroplane	hypocondria	photosynthesis
astronaut	biography	chlorophyll	ecology	hydrology	hypothesis	photogenic
	biology				hypoderm	

Glossary for Instructional Codes

Administrative Tasks (AD): teacher and students take care of nonacademic business, i.e., taking attendance, collecting homework, etc.

Assessment (A): e.g., quiz, test. Assessment must be formal and at least 50% of the class must participate in the assessment.

Class discussion (CD): Almost all student-to-student talk in a full-class setting.

Drill and practice (on paper, vocally, on computer) (DP): Students participate in rote practice (such as math or vocabulary worksheets). If this involves writing, also code as WW. If this involves computers, also code as UT.

Hands-on activity/materials (HOA): Students participate in an activity that involves manipulating materials.

Interruption (I): e.g., visitor, unexpected announcements, student disruption. This does not include asides or reprimands to students. An interruption significant enough to warrant a code is one that has derailed instruction. Only code interruptions lasting more than several minutes.

Jigsaw (J): A cooperative learning strategy. A topic is divided up into a few major areas or subsections. Students meet in expert groups to learn extensively about their own subsection. Then they join a group in which one expert from each subsection is represented and teach the others. Students must learn from each other to gain the whole picture.

Learning center/station (LC): Students working at various stations related to particular topics. This may occur in elementary classrooms or in laboratory classes.

Lecture (L): Teacher talks almost all the time. If students participate verbally, their interaction is minimal with questions and responses that are very short and/or obvious answers.

Lecture with discussion/whole-class instruction (LWD): Teacher talks most of the time. This differs from lecture in that students participate by answering questions that generally require more than a one-word answer. This differs from class discussion in that there is almost no student-to-student communication.

Out-of-class experience (OOC): e.g., field trips, interactions with other classrooms, concerts.

Reading seatwork (RSW): Reading their textbooks or other written material including words or sentences on a blackboard or projected on a screen. If in groups, add SGD.

Reciprocal teaching (RT): An instructional activity where students watch teacher model and then have the opportunity to develop skills during guided practice in four areas: prediction, questioning, clarification, and summarization. The teacher and students take turns assuming the role of teacher in leading the class discussion. As students acquire more practice with leading the

discussion, the teacher becomes a coach and allows the students to assume more responsibility. Here, the teacher steps out and acts as a coach. It is a very special case, does not happen often, and is built around literacy strategy learning.

Small group discussion (SGD): Students (2 or more) engage in conversation with each other about subject matter in small groups.

Student presentation (SP): e.g., student lecture, demonstration. This includes students going to the board to complete a problem or sharing their work (like a journal entry) from their seat. This does not include student responses to teacher questioning.

Teacher/instructor interacting with student(s) (TIS): Teacher moving among individuals or groups of students and talking to them.

Teacher modeling (TM): Teacher demonstrates or models with the whole class how to solve a new problem from start to finish. This also includes the teacher showing how something works or how to do something (formerly called "demonstration" where equipment was used). The teacher must actually do the activity while explaining it; not simply explain it.

Visualization (V): Teaching students to create a mental image of information being read before, after, or while reading a text.

Writing work (WW): Writing individually on worksheets, lab write-ups, journal entries, or other writing assignments. Can be combined with SGD.

Level of Cognitive Demand

What is "cognitive demand?"

For our purposes in coding classroom observation data, cognitive demand is the level of effort exerted by students* in response to a learning activity or task. There are six major categories, which are listed on the MSP-COP (listed here), starting from the simplest behavior (level 1) to the most complex (level 6). The categories can be thought of as degrees of difficulties. That is, the first one must be mastered before the next one can occur.

Cognitive Demand Codes

1 = Remember	Retrieve relevant knowledge from long-term memory (recognize, identify, recall)
2 = Understand	Construct meaning from instructional messages, including oral, written, and graphic communication (interpret, exemplify, classify, summarize, infer, compare, explain)
3 = Apply	Carry out or use a procedure in a given situation (execute, implement, use)

4 = Analyze	Break material into its constituent parts and determine how the parts relate to one another and to an overall structure or purpose (differentiate, organize, attribute, outline)
5 = Evaluate	Make judgments based on criteria and standards (check, coordinate, monitor, test, critique, judge)
6 = Create	Put elements together to form a coherent or functional whole; reorganize elements into a new pattern or structure (generate, hypothesize, plan, design, produce, construct)

Citation: Anderson. L.W., & Krathwohl, D.R. (Eds.). (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives.* New York: Addison Wesley Longman, Inc.

Why are we bothering to code the level of cognitive demand?

We're concerned with cognitive demand because the goal of the program we're evaluating is designed to result in teachers' use of literacy strategies in ways that increase students' achievement in reading AND in the core content areas. To effectively do this requires teachers to:

1. learn about the literacy strategies (including how to implement each one)

2. learn how and when to embed a particular strategy (or combination of strategies) into content-rich lessons in ways that

3. increase students' content-related knowledge

It's this third point that cognitive demand is designed to address. If a teacher successfully learned how to implement the strategies and used the strategies to design lessons that focused on key disciplinary concepts but did not require students to demonstrate more than a superficial level of understanding, it would be unlikely that increased achievement would result.

Therefore, to code the cognitive demand of classroom observation data that you collect you will need to:

1. have a solid understanding of each of the six categories

2. be able to classify the cognitive demand exerted by students* in response to a learning activity or task

***Note:** It is possible for a teacher to design an activity or task with a high potential level of cognitive demand. However, we are coding the level of cognitive demand of students' observed responses to the activity or task. For this reason, it is important when you are taking notes to*

capture as much of the teacher's verbatim instructions in setting up the activity as well as students' verbatim responses.

Codes for item "Student Engagement": Only one engagement code should be recorded for each interval. If engagement varies, choose ME (mixed engagement).

LE = low engagement, 80% or more of the students off-task
ME = mixed engagement
HE = high engagement, 80% or more engaged

Rating Students' Use of MCLA Strategies

The last two items on the COP require that the observer use his or her best judgment in characterizing the level of students' use of MCLA strategies. The instructions read, "Please put a check mark beneath the box which best represents what you observed in class." The first item pertains to students' independent use of strategies, while the second item refers to student roles and behaviors during any cooperative learning activities you may have observed. Please do your best in checking a box for both items based upon what you saw during class time. If there is no evidence of literacy strategies or cooperative learning activities, check the final box to the right.

*****It is important to be familiar with the rubric and include in your notes a summary of why you came to your rating.**

Tips for Assigning Ratings to Students' Use of Literacy Strategies

1. *Independent use of MCLA strategies*

   Some strategies are designed for use with groups of students (e.g., choral reading, paired reading). The important things to focus on are:

   a. Who decides when/whether to use a strategy?
      i. If student(s) decide, select a or b, as appropriate
      ii. If teacher decides, select c, d, e, (or f), as appropriate
   b. Do students require help in order to use the strategy?
      i. Do they receive support from peers? (select d)
      ii. Do they require help from the teacher? (select e)

*Note: Review intended model for gradual release of responsibility to students

   iii. Introduce
   iv. Model
   v. Guided practice
   vi. Independent use

2. *Student roles and behaviors*

   Not all small group activities are instances of cooperative learning. In cooperative learning activities, students are assigned specific roles (e.g., "recorder," "reporter,"

"getter," etc.). In deciding how to rate the class you are observing consider the following:

a. Assignment of Roles
    i. Do students have assigned roles?
    ii. Do students actually perform the role they were assigned?
    iii. Are students simply grouped but not assigned specific roles?
b. Behavior
    i. Are students engaged in discussion about content?
    ii. Are students responsive to each others' comments (or are they non-responsive or only respond to comments made by the teacher)?
    iii. Are there respectful interactions among students?

When in doubt:

- Describe in as much detail as you can:
    - What (if any) MCLA strategies were used?
    - Who decided whether/when to use the strategy?
    - Did students require help in order to use the strategy?
    - Where were students situated within the classroom (e.g., in rows facing front, in tables of 4, etc.)?
    - Specific roles assigned to students.
    - Student behavior/interactions.

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APPENDIX Form A

Research for Better Schools, 2009

Teacher Pre-Observation Interview Guide*

Hello, this is _____ from _____ in _____, ____. We've contracted with Memphis City Schools to conduct an independent evaluation of the Memphis Striving Readers Program. As part of this four-year evaluation, we are randomly selecting classrooms to observe. You are being asked to participate in this interview because one of your classes was chosen for observation.

This interview should take **no more than five minutes**. Please answer the questions as best as you can. As you read in the informed consent form that you have signed, your responses will be kept confidential and you will never be identified by name when we report the results of these interviews. Also, this interview and the observation will be used for research only, never for professional or personnel evaluation. You are free to stop participating or withdraw at any time. Let me know if you would like to skip a question because you don't know how to respond to it.

May I start the interview now? Please think about the class you teach during _____ period. [This will be mathematics, science, language arts, or social studies class].

1. What has this class been doing recently? *[Probe: on what unit are you working? What instructional materials are you using? What, if anything, will you be asking the students to do during that class?]*

2. Where does lesson fit within the unit?

3. What do you anticipate doing in class today (or on the day I will be observing)? *[Probe: What do you hope students will learn as a result of the work you have planned?]*

4. What is the content-related objective(s) of the lesson? (If teacher provides only a short SPI number, ask for specific detail about the goal(s) of the lesson). *[Probe: What, if anything do you hope students will learn about MCLA strategies as a result of the work you have planned?]* **NOTE: If the pre-observation interview is NOT conducted, this question should be added to the post-observation interview.**

5. Is there anything in particular I should know about the students I will be observing (e.g., is it an honors class?)

Thank you so much. See you on [observation date]. Please remember that I am coming to evaluate the MCLA program (the purpose of our study), not your performance.

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Form B

Research for Better Schools, 2009

Teacher Post-Observation Interview Guide*

Thank you for allowing me to observe your class. This interview should take **approximately five minutes**. Please answer the questions as best as you can. Your responses will be kept confidential and you will never be identified by name when we report the results of these interviews. You are free to stop participating or withdraw at any time. If for any reason you would like to skip a question, just let me know. May I begin?

***NOTE: If no pre-observation interview was conducted, begin with the following question:**

What was the content-related objective(s) of the lesson I observed? (If teacher provides only a short SPI number, ask for specific detail about the goal(s) of the lesson). *[Probe: What, if anything do you hope students will learn about MCLA strategies as a result of the work you have planned?]*

1. Were there any ways in which the lesson was different from what you had planned?

2. What did the lesson tell you about what your students are learning, and still need to learn? *[Probe: What did you observe during the lesson that makes you think this? How do you plan to further assess the students' learning?]*

3. What, if anything, do you plan to change in response to what we observed today in class?

4. What, if any, challenges have you faced **using cooperative groups** to actively engage students in this class? *[Probe: How have you approached these challenges?]*

5. For what purpose do you use cooperative groups?

Important: If the teacher and/or students used a literacy strategy, ask the following:

   a. Have these students used the _____ strategy in **your** class before today?

   b. What were you hoping to accomplish by using the strategy?

   c. How do you think it went? [Probe: What makes you think so?]

   d. How challenging was it for you to integrate that activity into this lesson? [Probe: What in particular was challenging? How did you address this? What would have made it less difficult?]

6. What is the next step for this class?

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Strategy Examples

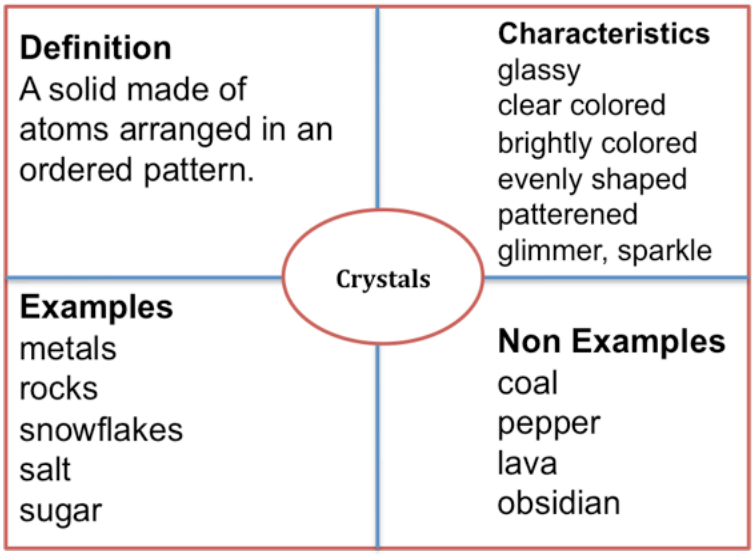
Excerpt from MCLA Session #8 in which DI is explained:

---- Design a lesson plan(s) in which you EXPLAIN and MODEL TWICE how to complete the GRAPHIC ORGANIZER (G.O.) you have selected. Model the G.O. using text the students have already studied as an example, then move on to a second modeling where you use another text the students have already studied. Modeling twice helps to "marinate' them in the process. Be sure to include a handout you design that shows students a step-by-step process for completing a graphic organizer (you may want to consider revising the handout from this class on how to complete a Content Analysis). This is part of DIRECT INSTRUCTION that is important for student understanding.

---- Design a GUIDED PRACTICE lesson plan(s) in which your students complete the GRAPHIC ORGANIZER you introduced in your MODELING sessions. This should be completed in pairs or in groups no larger than four students.

Frayer Model

(http://www.worksheetworks.com/miscellanea/graphic-organizers/frayer.html)



Frayer, D., Frederick, W. C., and Klausmeier, H. J. (1969). A Schema for Testing the Level of Cognitive Mastery. Madison, WI: Wisconsin Center for Education Research.

Developed by R. B. Cooter & K.S. Cooter for MCLA Fall 2008

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Example of a Reciprocal Teaching lesson plan:

1. Put students in groups of four.

2. Distribute one note card to each member of each group identifying each person's unique role.
- summarizer
- questioner
- clarifier
- predictor

3. Have students read a few paragraphs of the assigned text selection. Encourage them to use note-taking strategies such as selective underlining or sticky notes to help them better prepare for their role in the discussion.

4. At the given stopping point, the Summarizer will highlight the key ideas up to this point in the reading.

5. The Questioner will then pose questions about the selection:
- unclear parts
- puzzling information
- connections to other concepts already learned
- motivations of the agents or actors or characters
- etc.

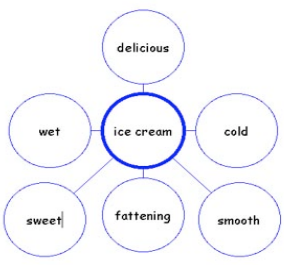
6. The Clarifier will address confusing parts and attempt to answer the questions that were just posed.

7. The Predictor can offer guesses about what the author will tell the group next, or, if it's a literary selection, the predictor might suggest what the next events in the story will be.

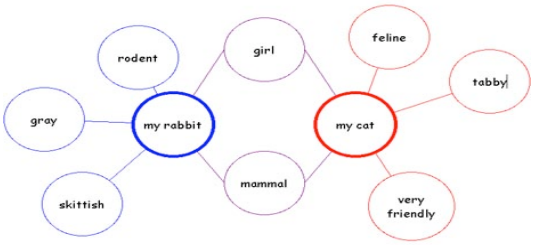
8. The roles in the group then switch one person to the right, and the next selection is read. Students repeat the process using their new roles. This continues until the entire selection is read.

Excerpt from http://www.readingquest.org/strat/rt.html

Bubble Map (B):



Double-Bubble Map (B):



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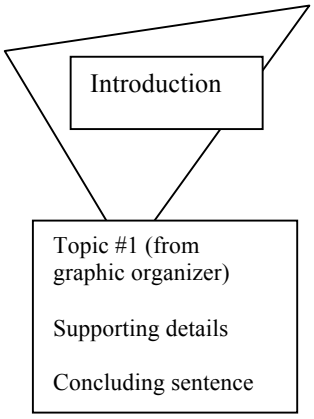
Sample: Semantic Feature Analysis (S):

	U.S.A.	Russia	Australia	Taiwan	Philippines	Indonesia	Singapore
Democratic gov't	+	+	+	+	+	-	-
Population more than 100M	+	+	-	-	-	+	-
Centrally Planned Economy	-	+	-	-	-	+	+

Sample Written Retelling completed outline (WR):



Spiders are very interesting creatures, and are even scary to some people. The scientific name for spiders is "arachnids," and they are insects. There are 37,000 kinds of spiders. There are even songs about spiders we learn in school. In this report we will learn facts and misconceptions about this special living thing we learned in our book and on the internet.

One misconception is that all spiders are poisonous. Some spiders are poisonous, or "venomous," but not all spiders have venom. Spiders use venom to stun or kill creatures they want to eat. Of over 37,000 kinds of spiders, only about 25 have venom that can hurt humans. Two spiders in the U.S. with venom that can hurt humans are the black widow and the brown recluse, but no one has been proven killed in over two decades (20 years).

Another misconception is that some spiders can be larger than a cat. Spiders come in many sizes. The largest is the Goliath bird eater tarantula. It is found in the rain forests of northeastern South America, and can be as big as a dinner plate It can grab birds from their nests! The smallest spider is from Borneo and is the size of a pinhead. So, there are no spiders larger than a cat, but they can be very large and also very small.

One thing we learned is that different arachnids eat different things. Many spiders eat insects, but not all do. There are spiders who dine on birds, frogs, fish, lizards, and snakes. So it is not true that all spiders eat bugs!

There are other things about arachnids, or spiders, that we still do not know. What is the largest spider in North America? Is it as big as the Goliath bird eater tarantula? We hope not. Also, is the silk spiders make all the same kind? How strong is their silk? Could you make clothes out of spider silk? We wonder where the name "arachnid" came from? And what about water spiders? Do any of them actually live under water? We still have a lot to learn about arachnids.

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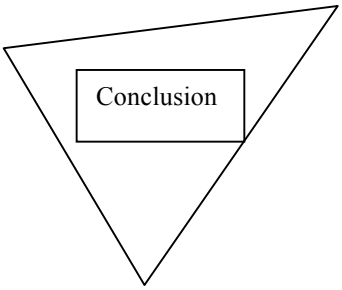

Spiders, or arachnids, are very interesting insects. They come in many sizes, live on different things, and some are poisonous. We want to know more about this special creature.

From: Reutzel, D.R., & Cooter, R.B. (in press for fall 2007). *Teaching children to read, 5th ed.* Upper Saddle River, NJ: Pearson Merrill Prentice-Hall.

RBS	A	B	C	D	Evidence
Intro Strategy	Teacher provides content instruction only.	Teacher mentions the strategy but does not provide students with a full description of the purpose of the strategy and when it is to be used.	Teacher (1) names the strategy and (2) describes the purpose of the strategy and when it is to be used. Teacher activates students' background knowledge and experiences to help them understand the strategy.		(e.g., Evidence sheet, Observation notes or written notes, copy of class activity)
Model	Teacher provides content instruction only.	Teacher makes *passing reference* to the strategy with no modeling provided.	In providing explicit and direct instruction, teacher *occasionally* models initial use of the strategies.	In providing explicit and direct instruction, teacher *consistently* models initial use of the strategies (e.g., think-alouds, questioning).	
Guided Prac	Teacher provides instruction without guided practice.	In providing instruction, teacher involves students in follow-up activities without feedback.	In providing explicit and direct instruction, teacher occasionally involves students in guided practice activities and provides general feedback.	In providing explicit and direct instruction, teacher consistently provides multiple guided practice activities using a variety of texts. Students receive relevant feedback with respect to their use of specific strategies.	
Indie Use	Teacher uses continual teacher-directed whole-class instruction to guide students' strategy application.	Teacher provides opportunities for students' independent practice but does not monitor students' progress.	Teacher provides opportunities for students' independent practice and monitors students' progress applying strategies to assess additional learner needs.		
***Differentiate**	Teacher relies primarily on whole-group instruction.	Teacher differentiates instruction but does not use data to flexibly group students.	Teacher differentiates instruction based on analysis of progress monitoring (e.g., small groups, use of technology, reteaching, use of curriculum resource center materials).		*Differentiated instruction or "learning style." Technology is *not* an essential tool.
Revisit Strategy	Teacher introduces each strategy once but does not revisit when new material is presented.	Teacher makes *passing reference* to previously taught strategies without providing opportunities for students to apply those strategies to new material.	Teacher *occasionally* revisits previously introduced literacy strategies as opportunities to apply them to new material.	Teacher *consistently* revisits previously introduced literacy strategies as opportunities to apply them to new material.	

Appendix T: Difference-In-Differences Estimations of the Impacts of the Whole-School Intervention

This appendix presents the results from estimating the impact of MCLA exposure on students in the Cohort 2 schools using a "difference in differences" approach. It is included here to supplement the analyses presented in Section VI of the report. As with the OLS regression analysis and the analysis of simulated outcomes, the evaluation year (Year 2 or Year 4) was the "treatment" variable used to represent the difference between student achievement before and after the whole-school intervention. The dependent variables, however, are modeled differently; they were calculated as the difference between the ITBS Total Reading, Comprehension, and Vocabulary NCE scores obtained at the end of Years 2 and 4 and the appropriate baseline score for each of these. Thus, the dependent variables are represented as the difference between Y_1 (post-test) and Y_0 (pre-test), or $Y_1 - Y_0$.

Following the difference-in-differences approach used by Rosenshine (2003) to estimate effects of high-state testing and presented by Buckley and Shang (2003), RBS first modeled the equation for estimating the effects of MCLA on student outcomes first as a simple OLS regression model with no additional covariates and then modeled the equation in an expanded model that included two types of covariates: several student demographic characteristics (gender, free or reduced-price lunch status, English language learner, and African American), and three dummy variables representing the differences among the four schools. These equations are listed below:

(1) $Y_1 - Y_0 = \delta_0 + \delta_1(\text{Treatment Variable})$

(2) $Y_1 - Y_0 = \delta_0 + \delta_1(\text{Treatment Variable}) + \delta_2(\text{Female}) + \delta_3(\text{Free or Reduced Lunch}) + \delta_4(\text{ELL}) + \delta_5(\text{AfrAmerican}) + \delta_6(\text{School A}) + \delta_7(\text{School B}) + \delta_8(\text{School C})$

Equations (1) and (2) have been called in the methodological literature "a change score method." It should be noted that if the pre-score was added as a covariate in Equation (2), that would be computationally equivalent to the OLS regression with posttest as a dependent variable presented in Section VI, because the estimated coefficient and standard errors for the treatment variable would be the same (Allison, 1990, p. 94). The change score method has been the subject of a broad debate in the methodological literature, which Allison (1990) summarizes in his article, and has been challenged with respect to its unreliability and sensitivity to regression toward the mean. However, evaluators decided to use this model and conduct the analyses, following Allison's demonstration that those criticisms are not universally sustained and that there is merit to pursuing the "change score method" and comparing it to the OLS regression model with the posttest as a dependent variable.

The results from equations (1) and (2) are presented in Table 1 and Table 2, respectively. The findings corroborate the conclusions evaluators reached after using the two approaches reported in Section VI. With the expanded model that accounts for the same covariates as the OLS regression and the simulated outcomes approach, the significance level and magnitude of effects on eighth-grade students' ITBS Vocabulary and Total Reading and the seventh- and

eighth-grade students' ITBS Vocabulary scores are similar to the results from Section VI. (Without controlling for demographic or school covariates, researchers using the change score method also found that the estimated effects of MCLA treatment on the eighth-graders' ITBS Comprehension, and the seventh- and eighth-graders' ITBS Reading and Comprehension change scores were significant.) This increased the evaluators' confidence in the findings presented in Section VI, and creates a compelling case for using several different methodologies in order to confirm the rigor of estimates and the resulting conclusions.

Table 1: Simple model – the only independent variable is MCLA treatment

Grade	Change in Test Score from Pre to Post	N	MCLA treatment effect	t-test	Significance
6	ITBS Total Reading	1099	1.078	1.651	0.099
	ITBS Comprehension	1106	0.537	0.727	0.468
	ITBS Vocabulary	1119	1.288	1.675	0.094
7	ITBS Total Reading	848	-0.560	-0.703	0.482
	ITBS Comprehension	892	0.071	0.082	0.934
	ITBS Vocabulary	854	-0.886	-0.878	0.380
8	ITBS Total Reading	846	3.078	3.339	0.001
	ITBS Comprehension	852	1.404	1.423	0.001
	ITBS Vocabulary	864	4.215	4.075	0.000
7 and 8	ITBS Total Reading	1694	1.225	2.032	0.042
	ITBS Comprehension	1744	0.709	1.089	0.276
	ITBS Vocabulary	1718	1.632	2.248	0.025

Table 2: Model with Covariates, Excluding Baseline Score

Grade	Change in Test Score from Pre to Post	N	MCLA treatment effect	t-test	Significance
6	ITBS Total Reading	1099	1.092	1.666	0.096
	ITBS Comprehension	1106	0.538	0.727	0.468
	ITBS Vocabulary	1119	1.341	1.738	0.082
7	ITBS Total Reading	848	0.067	0.081	0.936
	ITBS Comprehension	892	0.107	0.123	0.902
	ITBS Vocabulary	854	-0.263	-0.250	0.802
8	ITBS Total Reading	846	2.838	3.199	0.001
	ITBS Comprehension	852	1.136	1.165	0.244
	ITBS Vocabulary	864	4.056	3.899	0.000
7 and 8	ITBS Total Reading	1694	1.109	1.819	0.069
	ITBS Comprehension	1744	0.615	0.935	0.350
	ITBS Vocabulary	1718	1.479	1.999	0.046

References

Allison, P. D. (1990) Change scores as dependent variables in regression analysis. Pp. 93-114 in Clifford Clogg (ed.), *Sociological Methodology 1990*. Oxford: Basil Blackwell.

Buckley, J. & Shang, Y. (2003). Estimating policy and program effects with observational data: the "differences-in-differences" estimator. *Practical Assessment, Research & Evaluation*, 8(24). Retrieved February 25, 2011 from http://PAREonline.net/getvn.asp?v=8&n=24

Rosenshine, B. (2003). High-stakes Testing: Another Analysis. *Education Policy Analysis Archives*, *11(24)*. (As presented in Buckley and Shang, 2003).