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Implementing a Structured Reading Program in an Afterschool Setting: Problems and Potential Solutions

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Harvard Educational Review

In this article reprinted from the Harvard Educational Review, *Hartry, Fitzgerald, and Porter present the findings of their implementation-fidelity study of* READ 180 *in an afterschool setting. This two-year study examined factors that contributed to or inhibited successful implementation of* READ 180 *with fourth-, fifth-, and sixth-graders in a Boston-area school district's afterschool program. The authors also discuss some findings from a randomized controlled trial in which the* READ 180 *students were compared with other afterschool students not participating in* READ 180.

By focusing on the afterschool setting, this study adds to a rich tradition of over 20 years of research on READ 180. *The initial development of* READ 180 *was informed by the seminal research of Dr. Ted Hasselbring and the Cognition and Technology Group at Vanderbilt University, who focused on the implications of cognition and technology for the development of literacy skills. This research was extended by the Orange County Literacy Project in Florida, with support from the Scholastic development team. The collaboration among all three groups eventually resulted in the development of* READ 180. *Since the 1999 launch of* READ 180, *numerous scientific research studies have reported on the program's effectiveness across diverse populations of struggling readers. Hartry, Fitzgerald, and Porter extend* READ 180 *research beyond the traditional classroom setting, exploring whether and how the program can be implemented effectively during afterschool hours.*

The results of the study indicate that it is possible to successfully implement READ 180*—with minor modifications to the model—in an afterschool setting, particularly when sufficient attention is given to issues such as scheduling, transition time, teacher preparation, time-on-task, and fidelity of implementation. Furthermore, the study showed that* READ 180 *students and teachers found the program engaging and motivating, and that the rate of afterschool attendance among* READ 180 *students was significantly higher than among control group students.*

"Implementing a Structured Reading Program in an Afterschool Setting: Problems and Potential Solutions" by Ardice Hartry, Robert Fitzgerald, and Kristie Porter from *Harvard Educational Review*, 78:1 (Spring 2008), pp. 181–210.

Harvard Educational Review

Implementing a Structured Reading Program in an Afterschool Setting: Problems and Potential Solutions

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In this article, Ardice Hartry, Robert Fitzgerald, and Kristie Porter present results from their implementation study of a structured reading program for fourth, fifth, and sixth graders in an afterschool setting. As the authors explain, schools and districts often view an extended school day as a promising way to address the literacy needs of their lowest-performing students by devoting more time to reading instruction. While structured reading programs may help teachers use afterschool instructional time more effectively, the degree to which these programs improve student outcomes depends on the effectiveness of their implementation. Focusing on program implementation in one district as part of a randomized controlled trial, the authors find that successfully implementing a structured reading program in an afterschool setting depends on thoughtful preparation, suitable resources, and ongoing attention.

According to the most recent results from the National Assessment of Educational Progress, the "Nation's Report Card," only one in three U.S. eighth graders is reading at the proficient level or above, and both White students and students of color in eighth and twelfth grades scored lower in reading in 2005 than in 1992 (Grigg, Donahue, & Dion, 2007; Perie, Grigg, & Donahue, 2005). In addition, the gap between the reading levels of White and Asian students on one hand, and African American and Hispanic students on the other, has not narrowed since 1992. The persistence of these trends has led to a national push to boost literacy levels, particularly among adolescent students and students of color. The concern about literacy development, however, extends from elementary school to college. Less than half of ACT-tested high school graduates in 2005 demonstrated readiness for college-level reading, and there has been ongoing concern about the so-called "4th grade slump in reading abilities" that is evidenced by students who emerge from primary reading instruction with a mastery of basic reading processes but an inability to read for ideas, information, and concepts (National Council of Teachers of English, 2007, p. 1). Add to the preceding facts that more than three thousand students drop out of high school every day—often because they do not have the literacy skills to keep up (Kamil, 2003)—and it becomes painfully obvious why many believe that adolescent literacy is in critical need of attention.

Many school districts are turning to afterschool programs as a way to provide additional instructional time to struggling readers. The question hundreds of districts are asking themselves is not whether to provide students with extra help in reading, but what type of reading program they should provide. Unfortunately, districts find few good answers to this question. In this article, we describe how one school district implemented a structured reading program in an afterschool setting. We hope this discussion will help districts — particularly those facing poor achievement results — as they consider whether afterschool reading programs might be feasible to implement and beneficial to their students.

In 2005, MPR Associates, an independent research firm, received funding from the William T. Grant Foundation to evaluate the effectiveness of a reading program provided in an afterschool setting. One year later, we received a grant funded by the U.S. Department of Education's Office of Elementary and Secondary Education (OESE), under subcontract with Southwest Educational Development Laboratory (SEDL), to conduct a replication study of the same program. Both studies were conducted in partnership with a public school district in the Boston metropolitan area. The primary objective of these impact studies was to compare a highly structured academic intervention called *READ 180* with standard and generally less-structured afterschool program activities to determine the program's effectiveness. Developed and owned by Scholastic, Inc., *READ 180* targets students in grades four through twelve and, as of April 2007, was being used in over twelve thousand classrooms across the country (Scholastic, 2007). Though the *READ 180* curriculum is commonly used during the school day, Scholastic has found that many schools and school districts are contemplating its use as a supplemental, afterschool program. One reason may be that *READ 180* attempts to incorporate some of the best practices for afterschool programs, as will be discussed in more detail below.

In this article, we present one set of findings from a randomized controlled trial intended to investigate the use and effectiveness of *READ 180* in afterschool settings. The part of the study that is not reported here measured the difference in reading achievement between students who participated in *READ 180* in an afterschool program and students who participated in the district's regular afterschool program. The other part of the study, which is discussed in detail on the following pages, was an implementation-fidelity study designed to assess the extent to which the *READ 180* program was implemented as originally intended and to discover the factors that impeded or promoted its smooth and successful implementation. Overall, our objective was to determine whether *READ 180* could be implemented successfully in an afterschool setting. To address this overarching question, we explored the following specific research questions:

- What types of preparation and planning were required to deliver the reading program as designed? What obstacles were encountered prior to launch of the program, and how did district or Scholastic personnel respond to these obstacles?

- What resources and personnel were required in order to deliver the reading program as designed? Were there resources that seemed central to faithful program implementation?

- What were the key challenges the district and/or schools faced during the course of the year in implementing the reading program? How were those challenges resolved?

- How much additional time-on-task in reading are students likely to spend during a year of participation in a *READ 180* afterschool program?

Our goal in this article is to assist school districts in understanding the factors that impede or promote effective implementation of a structured academic program offered in an afterschool setting. Our findings suggest that structured reading programs can be implemented effectively in afterschool settings, but that they require strong preparation, the right resources, and ongoing attention to the program.

Previous Research

Our interest in researching *READ 180* in an afterschool setting was prompted by several major questions related to certain key aspects of the program. First, the research was motivated by the growing concern for and attention being paid to adolescents' literacy development. In fact, adolescent literacy has been undergoing a renewal of research interest, "due in large part to continued failures to close the achievement gap between privileged and not-so-privileged high school students" (Snow & Biancarosa, 2003, p. 2). The Carnegie Corporation of New York, along with a number of other foundations, formed the Adolescent Literacy Funders Forum (ALFF) to focus efforts on solving this problem. According to an article in *Carnegie Results*, "All the reading experts agree. America is having an awful time teaching its middle school and high school students how to read with comprehension" (Grosso de Leon, 2005, p. 1). The article also points to a decline in science and math achievement that closely parallels a similar decline in reading achievement, and it suggests that the two trends may be related, given that reading is a fundamental prerequisite for all academic achievement.

An important first step toward renewing the attention paid to adolescent literacy has been identifying critical elements in effective programs (Biancarosa & Snow, 2004), as well as other syntheses of expert opinion on effective approaches (cf., Alvermann, 2002; Carnahan & Cobb, 2004). In *Reading Next* (2004), Biancarosa and Snow distill the report of a panel of expert researchers in the field, in which were delineated fifteen "promising elements of effective adolescent literacy programs" (p. 12). The panel posited that while these elements have a substantial base in research and professional opinion, not enough research has been done that clearly demonstrates what works with adolescents. They suggested a set of planned variation studies that would test different combinations of elements. The elements are organized into two categories — instructional improvements and infrastructure improvements — and several in each category are relevant to this research: 1) direct, explicit comprehension instruction; 2) motivation and self-directed learning; 3) strategic tutoring; 4) diverse texts; 5) a technology component; 6) ongoing formative and summative assessment; and 7) extended time for literacy (p. 12).

The summary of research on the key elements cited above echoes to a large degree a policy statement commissioned by the International Reading Association (Moore, Bean, Birdyshaw, & Rycik, 1999). The authors of this statement suggest that, among other things, adolescents require a wide variety of reading material that appeals to their interests; instruction that builds their skills and fosters their desire to read increasingly complex materials; and assessment that reveals their strengths as well as their needs (Phelps, 2005).

Adolescent students who struggle with the development of their literacy skills for anywhere from one to twelve years may also have major hurdles to overcome in terms of their self-esteem and feelings of competence. In another summary of research on adolescent literacy commissioned by the National Reading Conference, Alvermann (2002) argues that positive perceptions of self-efficacy are central to motivation and can be increased by providing students with clear goals for what they are to learn, as well as feedback on the progress they are making. She also cites literature (Kamil, Intrator, & Kim, 2000) indicating that technology environments that heighten motivation can increase students' sense of competency. In addition, she refers to an extensive review by Guthrie and Wigfield (2000) of the ways that instruction influences reading engagement and achievement. The review indicates that while various instructional practices widely considered important do not seem to affect student outcomes directly, the level of student engagement acts as a mediating factor through which instruction directly influences outcomes.

This study was also motivated by questions about extended time for learning. One option that has been explored by many districts and supported by federal legislation is afterschool programs. In the emerging field of research on these programs, a representative document is one commissioned by the Nellie Mae Education Foundation, *Critical Hours: Afterschool Programs and Educational Success* (Miller, 2003). According to this report, evidence clearly suggests that effective afterschool programs make a difference for student learning. Specifically, they result in greater engagement in learning and higher academic performance. Miller's review of numerous studies showed that students who attended high-quality programs increased their social competence, academic performance, and civic engagement. Furthermore, the students who benefited most were the ones who were the most at risk, including students from low-income backgrounds and from non-English-speaking families.

Afterschool programs serve many purposes, from providing supervision during the afternoon to offering enrichment activities in which students could not otherwise participate. Since the passage of the No Child Left Behind Act (NCLB), many schools and districts have turned to afterschool programs as a way to supplement the regular school day and offer academic programs that will help increase students' reading and mathematics scores (see, among others, Miller, 2003). Offering more time for instruction, many believe, can help students who are performing below proficiency in school to "catch up" to their peers. This philosophy is explicit in the U.S. Department of Education's 21st Century Community Learning Centers "notice of priorities," which states that for children who are "not reading as well as they should, Community Learning Centers can provide extended time in which to overcome the obstacles that have in the past prevented them from becoming good readers" (Federal Register, 1997, p. 63774, as cited in James-Burdumy, Dynarski, Moore, Deke, Mansfield, & Pistorino, 2005). Yet the question of what types of programs should be offered during these additional minutes remains widely contested.

Previous studies have indicated that structured, high-quality activities in afterschool programs can improve student outcomes. In a review of sixty-eight studies, Hammond and Reimer (2006) found that the creation of "appropriate, consistent structure" (p. 35), where flexibility is balanced with well-developed procedures, often led to positive outcomes, especially in programs with an academic focus. Similarly, in a meta-analysis of previous

research, Lauer, Akiba, Wilkerson, Apthorp, Snow, and Martin-Glenn (2004) found "evidence of the effectiveness of a well-defined curriculum and structured approach" (p. 47). In examining a single program, the Massachusetts After-School Research Study identified several "quality indicators" for afterschool programs, including activities that are "appropriate, challenging, and stimulate critical/higher order thinking, are part of a larger project, have evidence of prior preparation, and have clear instructions" (Miller, 2005, p. 3).

These studies suggest that there is broad support for the hypothesis that extended learning time increases academic achievement, but support for this theory is far from universal. For example, Kane (2004) has argued that additional time is typically too limited. If students do not learn during the six hours they spend in class, he has asked, how can an additional hour or two make any difference? In focusing on student-centered concerns, other critics (Noam, 2004; Weisburd, 2005) have argued that at-risk students do not need an afterschool program that looks like an extension of their school day. Instead, these researchers recommend trying different approaches, with an emphasis on appealing activities and academic programs that allow students to be physically active rather than sitting at their desks.

Central to these criticisms is the belief that what takes place during afterschool hours should be different from what happens during the regular school day. Afterschool programs work well when they engage students, offer well-considered and structured activities, and provide additional time to help students in academics (Hammond & Reimer, 2006). These are demanding criteria, and programs that meet these criteria may be difficult to implement in the afterschool setting. Our research followed the implementation of a program that appears to meet these criteria and asked the question, "Can a structured yet engaging reading program be implemented effectively in the afterschool setting?"

The Problem of Implementation

In the current era of accountability, districts have to think long and hard about where to invest their limited program funding. The preliminary findings from our study of the impact of *READ 180* in an afterschool setting suggest that participation in *READ 180* led to statistically significant gains in oral reading fluency for fourth graders (Visher & Fitzgerald, 2006). In the second year of the impact study, we found that *READ 180* students performed substantially better than control-group students on a norm-referenced test. Although it is too early to say whether *READ 180* can have a positive impact on test scores, and, if so, for which populations of students, other previous research indicates that this program might be a feasible option for districts to adopt (see Scholastic, 2006, for a summary of previous research).

Once a program is adopted, implementation begins. When new curricula or programs are introduced to a school, teachers and administrators often have high expectations for their success. The practices may seem promising, and the theory behind the activities may appear meaningful. Yet, schools and districts frequently have difficulty aligning these practices with their own planning as they face challenges in scheduling, materials, technology, or personnel. These issues, which may seem minor during the planning

process, in reality can derail the potential for students to learn from the new program. This is the problem of implementation.

Implementation fidelity—how closely the program's delivery matches the intent of the program designer—includes such factors as the qualifications of teachers who are actually delivering the program to students, how much time students spend on task during the afterschool program, and barriers or unforeseen problems, such as problems with technology or scheduling. Given that *READ 180* was originally designed for the regular classroom day and not for an afterschool setting, we set out to focus on these fidelity concerns in our study.

The implementation study was based on three methods of data collection:

1. A series of site visits that included classroom observations and interviews with afterschool program teachers
2. Surveys of students and teachers
3. Measures of student engagement from each afterschool site, including data on daily attendance

These data were triangulated, examined for convergence on certain themes, and analyzed for answers to the research questions set forth above. These methods are described in detail in the section on methodology.

Rationale

The implementation study described in this article had two main purposes. The first was to monitor schools' fidelity of implementation in order to contextualize and interpret our findings about the program's impact on student achievement[1]. The second purpose of the implementation study—the one that is the focus of this article—was to assess whether *READ 180* could be implemented well in an afterschool setting.

The Intervention: READ 180

Scholastic developed *READ 180* based on the work of Ted Hasselbring at Vanderbilt University. Beginning in 1985, with a grant from the U.S. Department of Education, Hasselbring developed a prototype of reading software that used individual student performance data to differentiate instruction. Ten years later, the Vanderbilt software was modified into a program for the lowest-performing readers in schools in Orange County, Florida. Scholastic became involved in 1997–1998 when the corporation collaborated with Vanderbilt University and Orange County schools to test and refine the program. Scholastic launched *READ 180* in 1999–2001, and it was immediately implemented in hundreds of schools across the country. As noted above, it is estimated that *READ 180* is currently being used in over 12,000 regular classrooms across the U.S. (Scholastic, 2007).

The *READ 180* instructional model is intended to provide a well-structured way for teachers to organize reading instruction and classroom activity (Scholastic, 2006). A *READ 180* session begins and ends with whole-group, teacher-directed instruction. During the time between the whole-group meetings, students break into three small groups that rotate among three stations: small-group direct instruction by the teacher, a *READ 180* software or computer rotation, and independent and modeled reading. Each rotation is meant to target different reading skills. During small-group direct instruction, students at similar reading levels sit with their teacher at a small table, and the teacher uses manuals provided by Scholastic to deliver individualized instruction that meets students' specific needs. In the software or computer rotation, students are allowed to work independently at a computer workstation that provides them with "intensive, individualized skills to practice" (Scholastic, 2006, p. 10). Finally, in the independent and modeled reading rotation, students have a chance to read *READ 180* paperbacks or listen to *READ 180* audiobooks alone or in pairs. The independent and modeled reading rotation is meant to "build fluency and reading comprehension through modeled and independent reading" (Scholastic, 2006, p. 10). Before they begin the program, students take a proprietary, embedded test, the Scholastic Reading Inventory (SRI). This test yields Lexile scores, which measure the difficulty level of the reading materials and the students' reading ability on the same scale, allowing students to select materials that are challenging, yet within their reading ability.

READ 180 appears to possess many of the elements that have been identified as helpful to adolescent readers. As mentioned above, programs that are engaging for students, that encourage their self-esteem and sense of self-efficacy as readers, and that provide feedback on their progress are more likely than programs that do not include these features to benefit adolescents who are learning to read more skillfully. *READ 180* is designed to provide students with positive reading experiences. Many adolescents who are beginning readers are forced to read books written for much younger children; the books in the *READ 180* program, however, are written specifically for adolescents. Students in the program are supposed to read books that are challenging but not too difficult for their reading ability. Nevertheless, the topics are designed to appeal to adolescents and hold their attention. Students are provided feedback on their reading at regular intervals in the form of computer-generated progress reports; these reports include information on books read, words mastered, and growth in students' Lexile levels. Students are also intended to find the computer technology engaging, and they are able to work at the computer with a sense of privacy. All these factors point toward a program that should be successful with adolescents.

READ 180 has been the subject of a number of prior studies, some of which suggest that the program can lead to modest gains in test scores (Scholastic, 2006). Other research, however, indicates that *READ 180*, along with other technology-based programs, may have a limited impact on student achievement (Dynarski, Agodini, Heaviside, Novak, Carey, Campuzano, et al., 2007). In addition, a study conducted by Policy Study Associates in Fairfax County, Virginia, found that "levels of implementation of the *READ 180* instructional model are associated with different levels of improvement in reading comprehension" (Scholastic, 2006, p.18).

READ 180 *in Afterschool Programs*

Although *READ 180* has been used in regular-school-day classrooms for over ten years, it is new to the afterschool setting. Several design elements of *READ 180* suggest that it could be adapted for an afterschool context. First, it is designed to be engaging for students, as evidenced by its materials on topics of interest to middle schoolers and its use of an interactive computer program. Second, although its lessons were originally created to last for ninety minutes, the schedule can be modified to be more conducive to the shorter time frame of the afterschool setting. Third, the materials and activities of the program are designed to require limited teacher-preparation time; this is particularly true of the newest version of the program, called *READ 180* Enterprise Edition (Scholastic, n.d.). As in the district we studied, many afterschool teachers also teach during the regular school day and have little time to prepare lessons for an afterschool program. A curriculum that contains predesigned lesson plans and other planning materials is therefore very appealing for afterschool teachers.

Scholastic typically provides ongoing training for teachers who use *READ 180*. As is true for all school districts that purchase the program, teachers in our study received two days of training from a Scholastic representative prior to the launch of the program. The training covered the basics of the program, the materials, and instruction on using the computer (Scholastic, 2005). Teachers also had access to Scholastic RED, an online training and professional development program. Throughout the school year, Scholastic conducts "Teachers' Cadre" meetings in which *READ 180* teachers from across the district meet for an afternoon to discuss issues that have arisen and learn how to implement additional elements of the program.

Methodology and Data

Study Design

In order to participate in the study, schools had to have adequate facilities, enroll a minimum number of students, and commit to using *READ 180* in their afterschool programs. Because *READ 180* is designed for students who are reading at least two grade levels below their expected ability, the study required schools in which large numbers of students were reading below grade level. It was also helpful if afterschool programs already existed at the schools in order to limit the problems of implementation to those associated specifically with *READ 180*. With cooperation from Scholastic, we undertook a national search to identify and recruit a school district with a sufficient number of schools that met the criteria. The resulting study emerged from collaboration between MPR, Scholastic, and the school district itself.

Because we were studying a reading program designed for early adolescents who are reading below grade level, students in grades four through six who were reading below proficiency (based on the Massachusetts Comprehensive Assessment System [MCAS] reading or language arts assessments) were eligible to enroll in the district's afterschool program. Participation in the after-school program was voluntary, and parents were informed about the nature of the study. Written (i.e., active) parental permission was received from all parents prior to enrolling students in the study.

In Year 1 (2005–2006), a total of 294 students from three schools were enrolled in the afterschool program; in Year 2 (2006–2007), a total of 312 students from four schools were enrolled. The students received a battery of reading pre-assessments at baseline[2] and then were randomly assigned to either a group that used *READ 180* (the treatment group) or a group that received the regular district afterschool programming (the control group). The afterschool program ran from the end of October to the beginning of May each year, and at the end of the treatment period, students took a battery of post-intervention assessments. The same set of assessments was administered to both control and treatment groups.

The Setting and Sample

The school district that hosted this study serves a city of approximately 100,000 people and is located in the Boston metropolitan area. The district, which enrolls children from prekindergarten through twelfth grade, consists of approximately twenty-five schools and is one of the largest districts in the state of Massachusetts. Its population is diverse, with 46 percent African American, 38 percent White, and 12 percent Hispanic students. Almost 60 percent of students receive free or reduced-price lunches, and 5 percent are English language learners (ELLs).

A total of seven schools participated in the *READ 180* study: three in the first year (2005–2006) and four in the second year (2006–2007). The demographics of the seven schools in this study closely reflect the overall makeup of the school district but vary in significant ways from the state of Massachusetts as a whole. In the research study schools, African American students made up about 43 percent of the population; White students represented about 42 percent; and Hispanic students made up about 10 percent of the total enrollment in both school years. In the state as a whole, African American students accounted for about 8 percent of the total population, while White students constituted about 72 percent. About 57 percent of students in our study schools were classified as low-income, compared with fewer than 29 percent of students in the state. Also, about 13 percent of students in our study schools were classified as ELLs, compared with 5 to 6 percent of students in Massachusetts. This overrepresentation of low-income students and English language learners was an explicit goal of the study.

Afterschool students in the program were poorer and more likely to be members of racial/ethnic minorities than were students in the overall school population: more than half (53%) were Black, 16 percent were Hispanic, and about 75 percent were low-income. Table 1 presents selected demographic characteristics of the students enrolled in the study, by treatment-group status.

The average class size was similar for students in the *READ 180* and the control-group classes. In 2005–2006, the average afterschool class size was 15.0 students for both groups. In 2006–2007, the *READ 180* classes averaged 13.0 students while the control group averaged 13.4 students. In both cases, there was generally just one teacher per classroom. In a few cases, a student teacher was available to help in *READ 180* classes one or two days per week.

TABLE 1 *Selected Student Demographic and Academic Characteristics, by READ 180 or Control-Group Membership*

	Control (%)	*Read 180 (%)*	*Total (%)*	*n*
Gender				
Female	56.1	52.3	52.6	318
Male	43.9	47.7	47.6	288
*Race/ethnicity**				
White, not Hispanic	26.7	23.6	25.1	152
African American, not Hispanic	51.7	54.7	53.2	322
Hispanic, all races	15.3	16.7	16.0	97
Other	6.3	4.9	5.6	34
English Language Learner				
No	92.6	92.5	92.6	561
Yes	7.4	7.5	7.4	45
Special education status				
No	78.0	77.0	77.5	470
Yes	22.0	23.0	22.5	136
Eligible for free or reduced lunch				
Not eligible	24.3	25.9	25.2	152
Eligible	75.7	74.1	75.0	454
Grade				
4	35.9	34.4	35.1	213
5	39.9	41.0	40.5	246
6	24.0	24.6	24.3	147

* Ethnicity information was not available for one student who withdrew from the program at the beginning of the school year.

– Attrition: Students Who Withdrew

For the two study years combined, the schools jointly recruited 606 students to participate. During the school years, 116 students (19%) withdrew from the program, bringing the total number of students served throughout an entire year to 490. Parent requests (including moving) accounted for 96 percent of the withdrawals. The remaining 4 percent of students were either suspended from school or left due to medical reasons.

Twenty-two students moved out of the district during the course of the study; treatment- and control-group students moved at an equal rate, as would be expected given that the groups were randomly assigned. However, of the 95 students who withdrew from the afterschool program but remained in the district, 36 were from the *READ 180* program and 59 were from the control group, a statistically significant difference at the .01 level ($\chi 2 = 7.32$ on df = 1, p = 0.007).

Instructional Model

For the current study, the sixty-minute instructional model was used in all participating schools. Because the total afterschool program ran for only 120 minutes (which is true of many afterschool programs around the country), and the parameters of the study required that two groups of students pass through the model on any given day, Scholastic worked with the district to reduce the ninety-minute model to a sixty-minute model. During the first year of the study, the revised schedule limited the frequency of whole-group and wrap-up sessions while maintaining the twenty-minute small-group rotation. During the second year, the model was modified to include a whole-group session on alternate days, with two rotations instead of three undertaken each day in an attempt to incorporate as many of the original program components as possible and to maintain fidelity of implementation.

The Counterfactual: Control-Group Activities

Our implementation study focused primarily on the factors that impede or enhance effective implementation of a structured reading program in the afterschool setting. As such, much of the relevant data we collected pertains to the activities of the treatment group. However, we also collected some data on control-group activities in order to understand the afterschool experiences of students who were not assigned to the treatment group.

The control group, which was assigned to the district's standard after-school program, experienced a variety of afterschool activities, many of which included a small academic component. Students in the control group would begin their afterschool day with twenty to thirty minutes of homework help and then would participate in various activities designed by district afterschool curriculum personnel. The control-group activities contained academic elements but also included "enrichment" activities that tended to involve art, cooking, and sports as major components.

Data Collection and Measures

The data from this study were collected across two school years. Students in control and treatment groups received the same assessments, except that students who were in the treatment group were administered an additional five questions about *READ 180* on the survey. For the most part, the same data were collected in both years. We collected many of these data during site visits, which included interviews with key stakeholders and classroom observations. During the site visits, only *READ 180* teachers were interviewed, and we used a rubric only in our observations of *READ 180* classrooms; in control-group classrooms, we completed a brief observation questionnaire. We surveyed all teachers at both the beginning and the end of the year. Finally, we collected daily attendance rosters, computer log-on times, and monthly attrition data for all students. This section describes these measures.

– Interviews

We interviewed key stakeholders in the study sites at the beginning and end of each school year. We interviewed the principal and site supervisor together, and then conducted a group interview with the afterschool *READ 180* program teachers. Since the main purpose of the interviews was to understand the teacher's opinions about implementation, these interviews were semi-structured. Although researchers had prepared a list of questions, they allowed the conversation to flow naturally. Information was collected on all major questions, but teachers were allowed to discuss new topics as they arose. The interviews covered ease of implementation of the program itself; any issues related to technology, facilities, or schedules; issues related to the impact study and random assignment; and anticipated results of *READ 180*.

– Observations

In 2005–2006, we observed every *READ 180* afterschool classroom for an entire one-hour program session twice during the year. In 2006–2007, most *READ 180* classrooms were observed for the entire hour, three times during the year. Teachers were told in advance that we would be visiting to observe fidelity of implementation. To conduct these observations, we adapted for our study a rubric that Scholastic provides to help schools ensure quality implementation. The classroom observation protocol provides a framework for assigning points for classroom setup, fidelity of rotations, and classroom management. Classroom setup includes the availability and accessibility of *READ 180* materials, the classroom layout, and the availability of functioning technology. This construct is worth a total of twelve points. During each rotation, we observed the number of minutes the rotation lasted and the level of student engagement. In addition, each type of rotation necessitated its own specific fidelity measures. For example, during the small-group instruction, we observed whether the teacher explicitly spoke about connections between skills taught in the *READ 180* block and other reading tasks; whether teachers appeared to assess students' understanding of materials; and whether teachers used *READ 180* resources. Fidelity of rotations was worth a total of nine points (three points for each rotation). Finally, classroom management included sections on ease of transitions and on whether there was disruptive behavior and/or student engagement.[3]

– Surveys

We surveyed teachers from both the control group and the *READ 180* group at the beginning and end of the school year. The fall surveys collected information about teachers' credential status and educational background and asked about their perceptions of the goal of afterschool programs (e.g., recreation or academic enrichment). At the end of the year, *READ 180* teachers answered questions about their perceptions of the effectiveness of the *READ 180* program.[4]

- Attendance and Attrition Data

For all students in the afterschool program, researchers collected attendance data and calculated attrition rates. We used attendance as a measure of student engagement in the afterschool program. Attendance was taken daily, and we had access to individual student-level attendance data. For this measure, we tracked the number of possible days each student could have attended the afterschool program (i.e., the number of days the program was open for business) and the number of days each student actually attended the

program. For each month the program was open (October through May), we calculated an individual attendance rate for each student. Because some schools were open a different total number of days than other schools, we used attendance rates, rather than absolute number of days of attendance, as our measure.

Results and Discussion

The afterschool programs in this district were able to implement *READ 180* for an hour each day, but it took a lot of work prior to the start of the program, the right resources, and ongoing monitoring to implement the program. Advanced planning ensured that the infrastructure was in place to receive students and that the entire school staff, whether involved with the afterschool program or not, was part of a team that would support the program and its students. Having the "right resources and personnel" meant having certified teachers (as recommended by Scholastic), but it also meant ensuring that technology coordinators were available to troubleshoot equipment malfunctions, as well as recruiting additional personnel for each classroom to work with students outside of the small-group setting. Also, as additional problems arose throughout the year, the schools needed to have a system in place so that they could respond quickly to these challenges. The following section examines these aspects of implementation in more detail.

What types of preparation and planning were required in order to deliver the reading program as designed?

Delivering the *READ 180* program requires more than having new books and paper materials on hand; it also requires technology, classroom setup, and organization. Accomplishing all of this is complicated enough in a regular school day, but it creates new logistical problems in the afterschool setting, as the program may not be housed in classrooms that use *READ 180* during the school day, or because multiple classes may need access to the equipment during a short period of time. In addition, *READ 180* uses technology (although the computer component is a small part of the overall student day), so the schools need to be sure that technology workers are available throughout the afternoon to help solve problems. Overcoming these challenges takes strong preparation.

– Preparing the Facilities and Developing the Schedule

If an army marches on its stomach, then a school operates by its bus schedule. Afterschool programs usually need to accommodate time for snack, transition (such as restroom breaks), homework, and other activities before the buses roll at the end of the day. Although these activities may seem minor, they can make or break an afterschool program by constraining the amount of time left for instruction. For example, in our study, the buses left the school sites at 5:00 PM on the dot, which meant that all classroom instruction had to be completed by 4:50 PM at the very latest, to give students the opportunity to pack up their materials and come to the front of the building to board the buses. Since the school day ended at 2:50 PM, this gave students only 120 minutes in which to leave their regular-day classes, move into their afterschool program, eat a snack, visit the bathroom, do homework, and complete the day's instructional activities. If snack and bathroom break took too long at the beginning, teachers were unable to make up for lost time at the other end of the day, as buses wait for no one.

In addition, students in many elementary schools are not allowed to move from classroom to classroom independently but must move in a group with a teacher or other adult escort. In our study, we found that the schools struggled to find ways to accommodate students' immediate needs while also attending to their instructional needs. As one teacher put it, "A kid can't read if he's squirming in his seat."

The four schools that were able to ensure that students spent more than fifty minutes receiving instruction and the least amount of time in transition undertook extensive preprogram preparations. First, they considered the physical layout of their school. Because the distance between the regular-day classroom and the afterschool program can affect the number of instructional minutes available, the schools looked for ways to shorten the distance students needed to cover to reach their afterschool classrooms. They worked with the regular-day schoolteachers to release students early for the afterschool program, or enlisted the help of aides to bring snacks to the afterschool classroom, rather than requiring students to meet first in the cafeteria.

Efficient use of classroom time was a significant challenge for schools and teachers. Over the two years, we observed that students were in class for fewer than the sixty minutes set aside for the *READ 180* program. Of those sixty minutes, approximately ten or eleven minutes, on average, were used for transitions—setting up the program, moving between *READ 180* rotations, and cleaning up at the end of the day. The amount of time spent in transition varied from teacher to teacher: At the low end, one teacher had developed a routine so that her students received almost fifty-eight minutes of instructional time, out of a sixty-minute period. On the high end, another teacher spent about eighteen out of sixty minutes in transitions. In our study, most afterschool teachers did not teach in their regular-day classroom, but moved into a different classroom for the afterschool program. This required the teachers to make additional transitions, and they often felt that they were intruding on another teacher's time for classroom setup. One teacher said, "I'm very picky about how my room is arranged, so I always try to leave the room exactly as we found it. But that takes time."

There were also many cases in which multiple teachers would use a single *READ 180* classroom. One would teach a class during the first hour of the afterschool program, and then a second teacher would teach a class during the second hour. These teachers had to pack up and move quickly between classrooms. The schools that managed this process most successfully prepared individualized packets by teacher, so that during transitions, teachers only needed to grab a single bag containing all of their required materials. In addition, the schools had portable "homework" boxes, with rulers, pencils, and other equipment students might need to complete their homework, reducing the time students needed to move between classrooms.

– Technology and Teacher-Preparation Time

One notable difference between the first and second year of our study was the change in the amount of preparation time reported by teachers. In the first year, teachers used *READ 180* Version 1.6, which required them to prepare their own lessons, make copies of all worksheets, and prepare for the afterschool program as they would for the regular classroom day. For the second year, however, the new version of *READ 180*, called the Enterprise Edition, was bundled with Scholastic's *rBooks*, which are workbooks with daily

lesson plans. (More detailed information about these programs is available from Scholastic.) Teachers could rely on the program materials and did not have to spend as much time on preparation.

In the first year, most of the *READ 180* teachers reported that the amount of preparation time needed for each session was far greater than they had originally anticipated. During interviews, about half of the teachers said that the amount of time they spent preparing for the following week's lessons declined over the year, as they began to learn more about how the program worked and what supporting materials were available from Scholastic. The other half felt that the amount of preparation time did not change. Teachers reported spending anywhere from two to four hours per week preparing lessons, although a few reported that eight hours were required to "really prepare right." Because all of the teachers also taught during the regular school day, the amount of preparation time became a problem for some of them. In fact, at least two claimed that they spent their regular-day preparation time planning instead for the afterschool *READ 180* program. "Prep time is the biggest issue," said one teacher, "and it might be the reason why I don't do *READ 180* [in the afterschool program] next year."

In the second year, when schools used the *READ 180* Enterprise Edition, few teachers mentioned preparation time as a concern. When asked about the amount of preparation time required, they almost invariably said that they needed only a limited amount of time to prepare because the rBooks supplement laid out the day's activities so well. Teacher logs indicated that most teachers spent between 1 and 3 hours a month for preparation time, and, although one teacher spent 23 hours in the first month and about 18 hours in each subsequent month, the average of 4 hours per month in Year 2 was substantially less than what was reported anecdotally during Year 1.

What resources seemed to improve implementation?

Many afterschool programs struggle to find and keep qualified staff (Miller, 2005), and this problem is often exacerbated because Scholastic recommends that only certified staff teach *READ 180*. In our study, we looked at the qualifications of teachers, the number of additional adults in the classroom working with the students, and the extra roles required for the afterschool program.

The teachers in both years met the certification requirements for the *READ 180* program. A total of thirty teachers were involved in teaching the *READ 180* program across the two years of the study. Twenty-five had regular or state standard certificates; two had probationary certificates, which indicated that they had completed all of the certification requirements and were completing a probationary period to receive a regular state certificate; and three had provisional certificates (i.e., licenses through an alternative certification program).

Because teachers need to be able to concentrate on small-group instruction during the rotations, Scholastic suggests placing a paraprofessional assistant in each *READ 180* classroom. However, due to financial constraints, the district and schools were generally unable to accommodate this suggestion. In some classrooms, college students working as interns were able to fill the role of a paraprofessional, helping students with technology malfunctions or sitting with students who had particular behavioral problems. During our

observations, it appeared that having a second adult in the classroom led to smoother implementation of the structured reading program. Although the average implementation score in classrooms with a second adult was slightly higher than in those classrooms without one (7.4 compared to 7.1 out of a total of 9.0, a difference that is not statistically significant), only 7 of the 52 classrooms we observed had an additional adult, making it difficult to draw any conclusions about the difference.

Also, because working computers, equipment, and servers are needed to keep the computer rotation — and thus, the *READ 180* period — running smoothly, a district technology manager was assigned to address technical problems. In addition to having access to a district technology manager, one school had an afterschool supervisor who also served as the on-site technology expert and was always available during the afterschool program. The other schools reported that having an in-house technology person would have helped them handle technology issues more efficiently.

What were the key challenges the district or schools faced?

Despite all of the preparation that successful schools undertake before beginning the afterschool year, problems do arise. In addition, the quality of the program can decay or depreciate if not given ongoing attention. In this district, the schools found themselves responding to a variety of challenges, from teacher and student burnout, to technology problems, to increasingly heavy homework burdens.

– Teacher and Student Fatigue

There has been concern among afterschool program educators that teacher fatigue is an impediment to using structured academic interventions in afterschool settings (James-Burdumy et al., 2005). Teachers are at greater risk of suffering from burnout when they teach in both the regular-day and the afterschool programs, particularly when the afterschool program contains a significant academic component. We examined data that could be considered potential indicators of teacher fatigue, including the use of substitute hours in the afterschool program, teacher surveys, and interviews made during our on-site visits. Our results suggest that teacher burnout may not be as substantial an obstacle to implementing structured afterschool programs as we had feared.

Although there are many reasons other than fatigue for why substitutes might be required to fill in for regular afterschool staff, high levels of substitute hours could reflect teacher fatigue. While comprehensive data on substitute hours were unavailable for Year 1 of the study, we did interview substitutes and learn that they, in general, worked fewer days than anticipated by the schools. The exceptions were two who substituted for a teacher taking an extended medical leave. Data for Year 2 were available and showed no significant difference between *READ 180* and the control group in the number of hours worked by substitutes during the school year.

Teachers remained enthusiastic about the *READ 180* program through the end of the school year, as reflected in their survey responses. They said during interviews that a highly structured program is good for students, even in the afterschool setting. With a program such as *READ 180*, students move frequently between activities so they are less inclined to get bored, but they are still subject to a structure that keeps them disciplined.

Some teachers, however, did mention that the afterschool program created a long day for both teachers and students; to support that claim, teachers noted that some students did, in fact, appear more restless than they did during the regular school day. Teachers responded to student fatigue by making ongoing adjustments to the *READ 180* program. Most of the changes described below did not affect the underlying program model but allowed for enough change to retain student interest. Other modifications, such as shortening or eliminating small-group instruction, required altering the structure of the program.

The variety of materials kept students engaged for much of the year. Teachers generally reported (and site visits corroborated) that students found the *READ 180* books engaging throughout the course of the year. In an end-of-year interview, one principal stated the belief that "*READ 180* students had far more enthusiasm for their afterschool program" than did the students in the control group. To help ensure that students' interest remained high, teachers also introduced innovative activities such as "team-reading" or linking the books that students read during independent reading time to their small-group instruction.

– Technology Issues

Many of the challenges the schools faced were technology-related. While technology can be disruptive when it does not function properly, it is particularly problematic when a program is as dependent upon technology as *READ 180*. On the whole, most students were able to use the technology components on a regular basis, although both computers and audio players caused difficulties for the individual teachers and the district as a whole.

The most frequent complaints we heard from teachers about *READ 180* regarded computer problems, some of which were internal to the district and some of which were "bugs" in the *READ 180* system itself. Because the computer rotation was the students' favorite activity, and the teachers felt that it was the most effective component of the program, it was very frustrating when the computers did not function properly.

These problems were exacerbated during the afterschool program because, although teachers and site supervisors at all three schools in Year 1 reported that district personnel were very helpful in resolving technology issues, many problems had to wait until the next day to be reported. According to staff reports, rarely was someone immediately available from the district central office to help resolve issues during the afterschool period.

How much additional time-on-task in reading were students likely to spend?

Because the main purpose of an academic afterschool program is to increase the amount of instructional time students receive, it is critical that time-on-task remains high throughout the year. In addition, the time must be spent on the program (the model itself), rather than on other activities. This combination of time-on-task and fidelity to design constituted one of the central aspects of our data collection and analysis. We considered whether the model was implemented as designed. How much time did students spend receiving direct instruction, working with the computer, and reading independently? How much time was lost to transitions (before the afterschool program, during the *READ 180* model, and after the end of the session)? Finally, we examined whether there were differences in attendance between afterschool students who participated in the *READ 180* program and those who did not.

– Fidelity and Time-on-Task

READ 180 is driven by technology as a way of efficiently providing a structured but flexible program to students. Students are expected to spend twenty minutes each day using the computer and the *READ 180* software. While logged on to the computer, students can participate in a variety of activities, each emphasizing a different reading skill. Students move from the activities to embedded assessments of fluency, comprehension, and vocabulary. Once they successfully complete the tests at the end of each section, they are free to pursue another topic.

During the computer rotation, all students must have access to working computers, software, microphones, and headphones. Students also need to be engaged in the computer activities, not distracted by their fellow students, homework, the Internet, or other activities unrelated to *READ 180*. On the whole, our site visits revealed that the computer rotation was implemented with high levels of fidelity and was popular with both students and teachers. The average scores (on a scale of 0 to 3, with 3 representing a very high level of implementation) for the computer rotation ranged from 3.0 in November 2005 to 1.70 in November 2006, with an overall average of 2.40. These data are presented in Table 2.

TABLE 2 *Average Fidelity Scores on the Computer Rotation. Scale ranges from 0 to 3, with 3 representing a very high level of implementation. (n = 22 classrooms)*

	November	*April*	*Total*
2005–2006			
School A	3.0	2.3	2.7
School B	3.0	3.0	3.0
School C	3.0	3.0	3.0
TOTAL	3.0	2.8	2.9
2006–2007			
School D	1.8	1.8	1.8
School E	2.0	2.0	2.0
School F	1.5	2.3	1.9
School G	1.5	3.0	2.3
TOTAL	1.7	2.2	1.9
OVERALL	2.3	2.5	2.4

When the computers were working, students rotated through the session and remained actively engaged. What lowered the scores were faulty technology and short rotation times. Nonetheless, the level of student engagement remained high. In 114 out of 120 rotations observed over the two years, all students were on-task throughout the rotation.

Based on surveys and interviews, it was clear that teachers and administrators regarded the computer rotation as the "heart" of the *READ 180* program. During an interview one teacher stated, "Students seemed eager to come to the program, and almost all students were particularly excited about working on the computers." Several teachers also noted that most students especially liked the speaking and recording activities. When asked on the end-of-year survey to

rate the effectiveness of the computer rotation, 21 out of the 27 *READ 180* teachers surveyed (or 78 percent) rated the computer rotation as "very effective," while six teachers rated the rotation as "effective."[5] No teachers rated the computer rotation as "somewhat effective" or "not at all effective." Distributions of teachers' survey responses are presented in Table 5.

Teachers also appreciated that over time, students became quite competent at getting the computers up and running and troubleshooting computer issues, which freed teachers to work with other students. Teachers also indicated that the computer sessions, more than the other rotations, enhanced students' self-esteem and confidence, because the software is designed to acknowledge the success that students achieve through the SuccessZone. Teachers felt that the certificates of achievement were motivating for students, especially for fourth and fifth graders. One teacher believed that this confidence was sustained beyond the computer rotation, explaining, "The students appear to be more willing to take risks in class and to participate in all reading activities. They definitely have more self-confidence in their abilities and enjoy participating in all reading activities."

During the small-group instruction rotation, students sat at a table with the teacher either working on skills such as finding the "big idea" and reading aloud, or otherwise receiving direct instruction. Students were usually grouped according to need, based upon teachers' observations as well as embedded assessments, such as the SRI and the Phonics and Word Study Skills assessments.

In both November and April of Year 1, classroom scores for small-group rotation (on a scale of 0 to 3, with 3 representing a very high level of implementation) averaged 2.40 across all classrooms. Teachers were observed using *READ 180* resources and appeared to assess students' understanding of the materials on which they were working. These data are presented in Table 3.

TABLE 3 *Average Fidelity Scores on the Small-Group Rotation. Scale ranges from 0 to 3, with 3 representing a very high level of implementation. (n = 22 classrooms)*

	November	*April*	*Total*
2005–2006			
School A	3.0	2.7	2.8
School B	3.0	3.0	3.0
School C	2.7	3.0	2.8
TOTAL	2.9	2.9	2.9
2006–2007			
School D	1.8	2.0	1.8
School E	2.0	3.0	2.5
School F	1.5	2.0	1.8
School G	1.5	3.0	2.3
TOTAL	1.7	2.3	2.0
OVERALL	2.2	2.6	2.4

Classrooms received lower implementation scores mainly because students did not set reading and writing goals, and because about half of the teachers did not appear to explicitly connect the skills from the small-group instruction to other reading tasks. Because Scholastic requires these components for high implementation scores, their absence was notable. Despite this, students appeared to be on-task: In 111 of the 120 rotations observed over the two years, all students were on-task throughout the rotation.

During site visits, we noted some difficulty in conducting the small-group rotation. Teachers often had to leave the small group to help other students who were having trouble with the computers or with their independent reading. In a few instances, teachers started small-group instruction with an activity and then spent five to seven minutes of the rotation getting students set up on the computers, repairing headphones, finding books, or otherwise engaging in activities that pulled teachers away from the small-group instruction table. Although the students in the rotation were usually able to work on the assigned activity without further attention from the teacher, discipline problems sometimes arose.

In general, teachers believed that the small-group instruction rotation was very effective. On the end-of-year survey, nineteen out of twenty-seven teachers (or 70 percent) described the small-group rotation as "very effective," while six described it as "effective" and two described it as "somewhat effective." Again, the distributions of teacher responses are presented in Table 5. At one school, all three teachers agreed that small-group instruction allowed them to teach using their own strengths and individual teaching styles. In addition, teachers stated that the *READ 180* materials were helpful, and they appreciated being able to work with students in small groups based upon their individual needs. During an interview, one teacher said she believed the small-group activities were most engaging for her students, due to the very fact that the groups were small. Students, she said, "compete over giving answers, and they all want to read out loud." The smaller size of the groups also gave more students a chance to participate.

During independent reading, students selected books of interest to them and appropriate for their Lexile reading level, and settled into comfortable chairs, pillows, or beanbags to read on their own. They could also listen to audio recordings, in which a reading "coach" helped guide them through the text. In order to have a high implementation score, the rotation had to last eighteen to twenty minutes, and all students needed to have access to *READ 180* books at their reading level. All students needed to be engaged in reading, with or without audiotapes, and be undistracted by their peers. Students were encouraged to read aloud to each other, as long as they read appropriate *READ 180* materials at their Lexile level.

Rotation scores (on a scale of 0 to 3, with 3 representing a very high level of implementation fidelity) were based upon the number of students in each rotation who appeared to be on-task — that is, engaged in one or more of the above activities. These data are presented in Table 4.

In about 65 percent of the rotations observed, all students were on-task throughout the rotation. In the remaining rotations, students were frequently distracted, doing homework, or engaging in private conversations.

Teachers reported that students read many books during the independent reading rotation. One teacher reported that each of her students read over a dozen books during the year. Opinions were mixed about the books. Most teachers thought that students found the books interesting and engaging — one commented, "I never had students complain that they couldn't find a book they wanted to read" — but others said that their students had read all the books of interest before the end of the year.

Of the three rotations, teachers regarded independent reading as the least effective. On the end-of-year survey, six out of twenty-seven teachers (or 22 percent) rated independent reading as "very effective," while fifteen rated it as "effective," and six rated it as "somewhat effective." Table 5 presents these results as well.

Independent reading might also be the most difficult rotation to administer in an afterschool setting because students are often tired and restless after their six- or seven-hour school day. As one teacher commented, "The kids are fried by the end of the day," and would sometimes complain about having to sit still and read. In interviews, teachers suggested that while the computer work kept students interested, and small-group rotations required teachers to be physically nearby to ensure that students were on-task, students were on their own during independent reading time. After a long day, some students appeared to lack the stamina required to concentrate on books, however interesting and engaging those books might have been.

TABLE 4 *Average Fidelity Scores on the Independent Reading Rotation. Scale ranges from 0 to 3, with 3 representing a very high level of implementation. (n = 22 classrooms)*

	November	*April*	*Total*
2005–2006			
School A	3.0	2.4	2.7
School B	3.0	3.0	3.0
School C	3.0	3.0	3.0
TOTAL	3.0	2.8	2.9
2006–2007			
School D	1.8	1.5	1.6
School E	2.0	2.0	2.0
School F	1.5	2.0	1.8
School G	1.5	3.0	2.3
TOTAL	1.7	2.1	1.9
OVERALL	2.2	2.5	2.4

– Reducing Transition Time

During our site visits, we generally found high levels of fidelity to the design of the *READ 180* program with regard to transition time. Overall, the average score across all rotations was 2.4 out of 3.0, or 80 percent of the maximum score attainable. This suggests that *READ 180* was implemented in a way that was close to its original design. In addition, students appeared to be on-task with the computer and small-group activities, and were usually engaged in their independent reading rotation. The transitions between classes and rotations were smooth, with few disruptions. According to teacher and staff reports, initial implementation went smoothly for the most part. Over the year, teachers made small adjustments to the schedule that, in their professional opinion, were necessary to keep students engaged. Some of the changes included keeping students on the computer for longer periods and decreasing the amount of time for either the small-group instruction or the independent reading rotation.

TABLE 5 *Distribution of Teacher Ratings for Each Rotation*

	Very Effective (%)	*Effective (%)*	*Somewhat Effective (%)*	*Not at all Effective (%)*	*N*
2005–2006					
Computer	92	8	0	0	12
Small Group	75	25	0	0	12
Independent Reading	42	25	33	0	12
2006–2007					
Computer	67	33	0	0	15
Small Group	67	20	13	0	15
Independent Reading	7	80	13	0	15
OVERALL					
Computer	78	22	0	0	27
Small Group	70	22	7	0	27
Independent Reading	22	56	22	0	27

– Attendance

Attendance is a major concern of afterschool programs for a variety of reasons, all of which had implications for our study. Attendance and attrition are particularly acute problems in the afterschool setting because students are not required to attend, parents are less likely to view the program as integral to their child's education, and other afterschool activities often interfere with attendance. Yet, if students do not attend the program, they cannot benefit from it. Students can either officially withdraw from a program, or they can remain on the roster but fail to attend. In either case, students do not receive the suggested dosage of the program.

In addition to administering surveys and interviewing principals and afterschool supervisors, we collected data on student attendance from the afterschool program sites. We also downloaded information from the Student Management System (SMS), which is part of the *READ 180* software. Results show that attendance rates for students who were assigned to *READ 180* were higher overall than attendance rates for students in the control group. The difference between the two groups was statistically significant ($t = 3.4$, $p = 0.001$; see Table 6). When students who withdrew from the program were removed from the analysis, we found that *READ 180* students still attended at significantly higher rates ($t = 2.3$, $p = 0.021$).

TABLE 6 *Percentage of Possible Days Attended by Control and READ 180 Participants, by Month (n = 587 students)*

	Control (%)	*READ 180 (%)*	*t-test*
October	87	89	0.8
November	81	87	3.0**
December	75	81	2.5*
January	70	79	3.3***
February	63	73	3.6***
March	65	74	3.0**
April	59	67	2.8**
TOTAL	70	78	3.4***

* p<0.05; ** p< 0.01; ***p< 0.001

Note: Excludes students who moved.

Attendance rates declined as the school year progressed, but rates for *READ 180* students declined less rapidly than those of control-group students. With the exception of October, in every month, *READ 180* students attended the afterschool program at significantly higher rates than the control-group students (see Table 6).

Many factors may contribute to these higher attendance rates, including parental interest in students' reading and student engagement in specific after-school activities. However, if the goal of an afterschool program is to extend the instructional time for students, then the fact that students who received *READ 180* attended at significantly higher rates is important. Only students who attend the afterschool program can receive additional instructional time, so schools and districts should take probable attendance rates into consideration when they select afterschool activities and programs. Students who received the structured academic program continued to attend at higher rates than other students throughout the year, and this finding contradicts the findings from another study of afterschool programs (Miller, 2005), which found lower attendance among students in the academic program. One explanation for our different results might lie in the fact that many students appeared to find the program engaging. One fourth-grade student wrote on her survey, "*READ 180* is so fun, I'd like to do it again next year."

Conclusion

Under pressure to rapidly improve test scores in all disciplines, schools and districts are scrambling to find ways to help adolescents with low levels of reading achievement learn to read better. *READ 180* has shown promise for improving adolescent reading in previous research (Scholastic, 2006), and this study has shown that it can be altered to fit into an afterschool setting. This study has also demonstrated that students who use *READ 180* in afterschool settings may attend afterschool programs at higher rates than students who do not have access to the program. Schools and districts should be aware that adopting any program, but particularly one with a large technology component, requires a strong emphasis on implementation. Because the *READ 180* program requires significant resources in terms of teachers and materials, it is very important that districts and schools consider whether they will be able to implement it fully and faithfully before investing in *READ 180*. By describing how one school district implemented *READ 180* in its afterschool program, we have tried to highlight the obstacles and possible solutions of which schools and districts considering purchasing this program should be aware.

Our findings suggest that strong preparation is required before the program can be launched in schools. Issues such as the physical layout of the school, access to technology, and scheduling are paramount to a smooth initial implementation. Schools need to consider specific questions, such as:

- Which classrooms are conducive to the use of *READ 180*?
- Will teachers have to move to new classrooms for the afterschool program?
- How will that transition work?
- How will snack and homework time—not to mention bathroom breaks—be accommodated within the daily schedule?

Districts and schools must also consider the availability of necessary resources, including:

- Can the district or school afford to pay certified faculty to teach in the afterschool program?
- How much additional preparation time should those teachers receive?
- Will someone who is familiar with technology be available during afterschool hours to troubleshoot any problems that arise from the technology?
- Can the school provide an aide, such as a college student (intern) or paraprofessional, to assist with the *READ 180* classes?

The overarching question addressed in this article is whether it is feasible to implement *READ 180* successfully in afterschool programs. Based on our observations, the answer is "Yes". Although not without challenges, *READ 180* was offered four days a week from October through the beginning of May in each year of our study, meaning that students were exposed to as much as 85 hours of supplemental reading instruction. The components of the program that Scholastic identifies as central to student learning—the specific materials, the computer-based activities, and the Lexile-leveled audio recordings with reading coaches—were included every day that the program was offered. Students remained, on the whole, very engaged in the program, and attendance was high,

especially for an afterschool setting. Teachers were enthusiastic, as were their principals. As schools and districts search for solutions that will bring struggling readers to grade level, they will continue to consider an extended school day as one way to provide these students with additional instruction in reading. Districts are looking for afterschool programs that not only produce higher test scores but also are appealing, can be adapted to the casual environment of afterschool programs, and can be implemented effectively. The results of this study suggest that *READ 180*—a program about which students and teachers remained enthusiastic even after nearly a full year—can, with minor modifications, be implemented successfully in an afterschool setting.

Notes

1. Although the impact study was based on a randomized controlled trial that focused on student achievement outcomes, a finding of no impact could mean one of several mutually exclusive things: First, it could mean that the program was implemented well but is simply not effective. Alternatively, it could mean that the program delivered was not the same as the one initially designed, and, therefore, the finding of no impact does not necessarily mean that the program itself is ineffectual. Conversely, if one does find a positive impact, one wants to verify that the program was actually implemented as designed. We also wondered whether fidelity of implementation scores would be positively correlated with student test scores.

2. Assessments administered at baseline and at the conclusion of the intervention in the first year included the Dynamic Indicators of Basic Early Literacy Skills (DIBELS), the Group Reading Assessment and Diagnostic Evaluation (GRADE), and the Test of Word Reading Efficiency (TOWRE). Assessments administered at baseline and at the end of the intervention in Year 2 included the DIBELS, the Title Recognition Test (Cunningham & Stanovich, 1991), and the Early Reading Attitudes Survey (McKenna, Kear, & Ellsworth, 1995). We also had post-intervention assessment results from the SAT 10.

3. Classroom observation rubrics are available from the authors upon request. Although classroom management was scored (and worth nine points), this score was not included in the total for "implementation fidelity" because management can be excellent even when the program is not well implemented, thus confusing the total score. We also observed the control-group classes, but, because they varied widely in terms of activities, we did not have a "fidelity" rubric to score. Instead, we observed the classes by completing an observation form that asked about similar constructs, such as type of literacy activities, student engagement, access to equipment and materials, and elements of classroom management. Because this was a randomized controlled trial, we also ensured that control groups were not receiving the *READ 180* program, which would have been a problem of contamination.

4. The teacher survey instrument is available from the authors upon request.

5. Three teachers did not return post-intervention surveys.

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The authors would like to thank Beverly Farr, Mary Visher, Andrea Livingston, Debra Jones, and Michael Vaden-Kiernan for their helpful comments on an earlier draft.

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