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Building Capacity: An Evaluation of Florida Literacy and Reading Excellence (FLaRE) Professional Development to High Schools

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Executive Summary

What Is the Impact of FLaRE on Students and Teachers?

The FLaRE professional development (PD) model aims to build schools' capacity to become independent in implementing research-proven practices to address students' literacy needs. This study compared outcomes for schools receiving FLaRE support vs. schools not receiving FLaRE support, and for schools receiving Level 1 FLaRE support (the highest level) vs. schools receiving Level 3 support (the lowest level). Results showed no statistically significant impact of FLaRE PD for high schools across Florida. Yet, it is possible that comparison schools had in place staffing capacity and alternative sources of PD support that may account for the lack of effect. Consistent with the research on professional development and school reform models, student achievement in FLaRE schools was higher in the second year of FLaRE support than in the first year.

Additional analyses suggested that FLaRE had a positive impact on teacher knowledge and practice. We conducted interviews with Coordinators (the PD providers) and reading coaches (the primary targets of the PD). The Coordinator interviews suggested that FLaRE PD resulted in improved practices in five areas: (a) use of data to inform instruction, (b) motivation to try new instructional strategies, (c) knowledge and skills of new teachers, (d) collaboration among teachers, and (e) willingness of content area teachers to integrate explicit vocabulary and reading comprehension instruction into their lessons. The reading coaches we interviewed largely did not perceive substantial improvement in student scores (as we found in the quantitative analysis). However, they did suggest two additional areas of impact on students: (a) higher scores on assessments of basic skills (e.g., oral fluency) and assessments directly related to the curriculum (e.g., READ180 assessments), and (b) increased motivation to read.

Which PD Practices Are Most Effective?

The theory of action guiding this study postulates that Coordinators may strengthen schools' capacity by providing four types of PD activities: general PD (addressing general knowledge base); targeted PD (addressing school needs); classroom presence (e.g., observing, co-teaching, or modeling); and student contact (e.g., administering assessments and addressing specific literacy needs). We have found a statistically significant correlation between several types of FLaRE PD activities and student achievement; However, this relationship was observed only for small high schools and those schools with a relatively lower number of students eligible for free/reduced-price lunch; these schools may have less complex needs and may be quicker to change following FLaRE support. For the smallest schools (the smallest quartile, with fewer than 966 students), adding to current practice 6.5 hours per month of direct, in-classroom modeling and co-teaching by Coordinators may increase the number of students reaching highest standards in reading by 10%. Alternatively, this 10% improvement requires adding 16.5 hours per month of PD designed specifically to meet the school's needs (targeted PD), or 33.5 hours of more general PD. For the FLaRE schools with less extreme levels of poverty (the smallest quartile, with less than 42% of their students eligible for the free/reduced-price lunch price program), 11.4 hours of targeted PD brings a 10% gain.

These findings are supported by the qualitative data collected through interviews with FLaRE Coordinators, who identified modeling in classrooms as the most effective activity—when it was followed by debriefing, conversations, and/or follow-up observations. Individual interviews with teachers and coaches and observations of intensive reading classrooms showed that reading teachers and coaches would benefit from expert support to identify PD content that best addresses the literacy needs of the school population. Additionally, assessing school receptiveness and infrastructure at the start of the school year may increase the efficiency of Coordinators' time allocation.

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Chapter 1: Introduction

This evaluation study seeks to investigate whether the professional development (PD) provided by the Florida Literacy and Reading Excellence (FLaRE) program benefits student outcomes. This chapter provides a broad overview of the evaluation, beginning with an overview of the program itself. This is followed with a review of the relevant research literature, which provides context information about what is known about successful PD programs, and what is known about adolescent literacy instruction. The chapter concludes with a discussion of the specific goals of the evaluation, and of the methods used to achieve those goals.

Overview of Florida Literacy and Reading Excellence (FLaRE)

This study focuses on a state-wide literacy PD program in Florida delivered by the Florida Literacy and Reading Excellence (FLaRE) Center. It aims to promote teachers' and coaches' knowledge and use of research-based effective instructional and assessment practices. Beginning in the 2007–08 school year, schools eligible for FLaRE services could select one of the following three service plans, which vary in the intensity of support provided:

- **Level 1 Service Plan:** maximum support from a FLaRE Area Coordinator, including scheduled PD opportunities (e.g., K–12 Reading Endorsement in-service support), support at monthly Literacy/Reading Leadership Team meetings, support for the development of observation classrooms, and 2 full days per month of PD for the school's reading/literacy coach.
- **Level 2 Service Plan:** moderate support from a FLaRE Area Coordinator, including scheduled PD opportunities (e.g., K–12 Reading Endorsement in-service support), support at monthly Literacy/Reading Leadership Team meetings, and support for the development of observation classrooms.
- **Level 3 Service Plan:** minimal support from a FLaRE Area Coordinator, including scheduled PD opportunities (e.g., K–12 Reading Endorsement in-service support), monthly e-mail and/or phone contact and, to the extent practicable, onsite visits (provided by request only).

The professional development activities reviewed for the purposes of this study are the support, training, and consultation provided by the FLaRE Area Coordinators. The FLaRE office, located at the University of Central Florida, hires and trains Area Coordinators to train coaches and build their knowledge and skills; in that regard Coordinators help the schools build the internal capacity needed for sustained instructional improvement. In this pyramid model, the FLaRE Area Coordinators work primarily with the reading coaches (and the reading coaches are then working with teachers and communicating that knowledge). However, the Coordinators also work with administrators, teachers, and students. Area Coordinators' responsibilities include:

- Ensuring that school personnel are well educated in mentoring skills and in effective instructional practices that support literacy development for all students;
- Assisting school districts to identify ongoing PD needs;
- Providing technical assistance to school districts in arranging PD;
- Supporting school and district personnel in planning and carrying out PD experiences; and
- Problem-solving with school and district personnel on challenges to effective implementation of high-quality reading programs.

Schools eligible for this support typically are low performing (at the "D" or "F" level on a five-level continuum based on their reading scores on the state standardized test); any school with less than 40% of

its students performing at grade level in reading is eligible. The number of schools receiving FLaRE support has been increasing every year. In 2006–07, 255 schools received FLaRE support; this number grew to 337 in the following year, and 370 schools in 2008–09.

The main role of the Coordinators is to help schools build the capacity to carry on school improvement processes and promote students' literacy skills. Coordinators facilitate leadership, knowledge, and experience in schools for effective use of research-based literacy strategies. One part of the PD is structured: Coordinators are to facilitate in-service towards K–12 reading endorsement for Competencies 1 and 3–6, clinical mentors, and the Reading Endorsement for ESOL (REESOL).

Coordinators tailor the PD content and format to the unique needs of each school. At the beginning of the school year, Coordinators review the district reading plan and meet with school principals to review the schools' literacy concerns and issues, and work with principals to refine schools' plans of action. Coordinators also provide information to principals about PD opportunities such as CAR-PD. During the school year, major aspects of Coordinators' support include coaching and mentoring of literacy coaches, continued technical assistance in assessing school needs in literacy, and utilizing data to inform instruction. Coordinators also facilitate building the infrastructure needed for successful school improvement, by:

Providing support to school leaders in planning and decision making and providing ongoing support in the creation of Reading Leadership Teams. The main goal of this support is to help the Teams become independent and work on their own to develop and implement effective literacy plans of action. The intention is for Coordinators to work with RLTs to help them make better decisions regarding how they want to provide PD to the teachers.

Helping school staff build connections with other staff within the same school or in other schools to promote opportunities for collaboration. Finally, Coordinators may point school staff to additional resources and PD opportunities outside their school or school district. For example, they can help the school collaborate with family literacy initiatives, regional adult literacy entities, school and district administrators, local district reading councils associated with Florida Reading Association (FRA), International Reading Association (IRA), and FLaRE Faculty Fellows.

Research on Effective Professional Development Practices

Research suggests that teacher knowledge has a direct link to teachers' instructional practices in the classroom (Fitzharris, Jones, Crawford, 2008; Garet, Cronen, Eaton, Kurki, Ludwig, et al., 2008). Although the body of replicable, rigorous research on effective professional development (PD) practices is relatively small, there is a consensus among researchers on the following key features: content focus on teachers' knowledge of the subject, on the curriculum, or on how students learn the subject (Kennedy, 1998), intensity and length (Yoon, Duncan, Lee, Scarloss, & Shapley, 2007), and a culture of collaboration and inquiry. These three features are discussed briefly below.

The types of PD programs shown to have the largest impact on teacher knowledge are those that focus specifically on the content that teachers need to teach in the classroom (Kennedy, 1998; Garet et al., 2001). Teachers need to find ways to translate abstract ideas, such as knowledge about literacy research, into action in the classroom. In addition, when teachers are more comfortable with teaching a particular topic, they are more likely to allow for student questioning and discussion, and to use other strategies that encourage student mastery of content (Correnti, 2007).

There is a consensus among experts and researchers that longer-lasting PD produces greater teacher knowledge and is correlated with better student outcomes (Cohen & Hill, 2001; Garet et al., 2001;

Guskey, 2003). The intensity of the PD is also a key factor in its success; a research review by the Southwest Regional Educational Laboratory (SWREL) reviewed nine studies of PD interventions. They found that interventions providing more than 14 hours of PD had a positive and significant effect on student achievement, while those providing 5 to 14 hours did not (Yoon et al., 2007). To enable a sufficient amount of training, teachers may build on multiple sources of PD. Greater availability of such resources can lead to better teacher knowledge and student academic achievement (Smylie et al., 2001).

Research on models of job-embedded PD suggests that effective PD builds on collaboration among school staff to sustain change over time (Giles & Hargreaves, 2006). First, teachers who work together are more likely to have the opportunity to discuss concepts, skills, and problems that arise during PD experiences. Second, teachers who are from the same school, department, or grade are likely to share common curriculum materials, course offerings, and assessment requirements. Schools need to encourage as many teachers as possible to participate jointly in PD efforts to reach an observable school-wide effect (Corcoran, McVay, & Riordan, 2003).

Improving Teachers' Knowledge About Adolescent Literacy

A national panel of experts recently convened by the Institute for Education Sciences suggested that there is a "need for serious attention to the challenges of improving reading instruction in upper elementary, middle, and high school." (Kamil, Borman, Dole, Kral, Salinger, & Torgesen, 2008). At these grade levels some students have been carrying with them deficiencies in basic reading skills while at the same time facing increased complexity of literacy demands in English language arts and content areas.

Adolescent readers need to be able to comprehend, analyze, and synthesize information in multiple texts. Furthermore, teachers in secondary schools expect students to independently apply reading and study skills to be successful (Roe, Stoodt, & Burns, 2001). However, many students lack basic reading skills and are unable to comprehend content-area textbooks at their grade level. Experts have recommended that secondary school teachers integrate explicit vocabulary and reading comprehension strategies in addition to providing remedial intensive reading interventions to struggling readers (Biancarosa & Snow, 2006; Kamil et al., 2008).

Reading teachers in secondary schools need to be knowledgeable about a large array of instructional practices. This knowledge must span everything from basic skills, such as phonemic awareness and fluency, to advanced skills, such as understanding cause and effect, and understanding an author's intentions and motives. In the Reading Next report, Biancarosa and Snow report 15 elements of adolescent literacy instruction recommended by a panel of experts, including direct, explicit comprehension instruction, content area literacy, motivation and self-directed learning, use of technology, formative and summative assessment, teacher collaboration, leadership practices, and utilizing a literacy plan of action. This large amount of instructional knowledge that teachers need necessitates appropriate amounts of PD to ensure that all teachers are well prepared to address the needs of all students.

The complexity of adolescent literacy instruction suggests a need for PD that not only provides teachers knowledge and techniques that are grounded in scientifically based reading research, but also uses elements such as collaboration, co-teaching, and coaching to ensure that the practices being taught are making it into the teacher's classroom. Puig and Froelich (2007) argue that PD provided through coaches in a way that enables observations, co-teaching, conferring, studying, and reflecting on current practices is a model that can effectively facilitate transformation. Similarly, Cantrell & Hughes (2008) report that enabling ongoing professional development to build teacher knowledge through coaching or through teacher collaboration can increase teachers' self-efficacy related to reading instruction and increase the likelihood that teachers will implement the instructional practices in the classroom.

In sum, schools need to address adolescent literacy through a number of different venues, including explicit reading instruction in English language arts, content areas, and reading classes that provide intensive interventions for struggling readers, and through comprehensive professional development to teachers. The next section details the professional development model of Florida Literacy and Reading Excellence (FLaRE), which is the focus of this report.

Purpose of the Evaluation of FLaRE

This study provides three major contributions to research, policy, and practice. First, it assesses the impact of FLaRE Coordinators' support on students' reading achievement, thus providing empirical evidence regarding the Coordinators' impact based on rigorous research design. Second, by analyzing the nature of, and variations in, FLaRE Coordinators' support, the study provides practical information about the types of Coordinators' activities associated with improved student outcomes. Third, by analyzing Coordinators' practice in the context of the characteristics of high schools in Florida, this study is able to provide recommendations regarding the necessary conditions for FLaRE support to have an observable impact.

Based on the available research evidence and the availability of activity data in Coordinators' monthly logs of their work, we developed a theory of action describing the relationship between features of Coordinators' FLaRE support and student outcomes. According to this theory of action, FLaRE Coordinators are expected to strengthen schools' capacity to address students' literacy needs in four ways: general professional development addressing general knowledge base and skills; targeted professional development addressing identified literacy needs; technical assistance in the classroom involving observing, co-teaching, or modeling; and working directly with students to administer assessments and explore strategies that address the students' needs. These four types of activities are enabled by a close collaboration between the Coordinator and the reading coach, either by working directly with teachers or by building the coach's capacity to work with teachers. Based on the research cited in the introduction section, we assumed an immediate impact on teacher knowledge, which would in turn facilitate a long-term impact on students' reading performance. Figure 1 shows the assumed links between the PD activity categories and teacher and student outcomes.

This study is guided by two research questions:

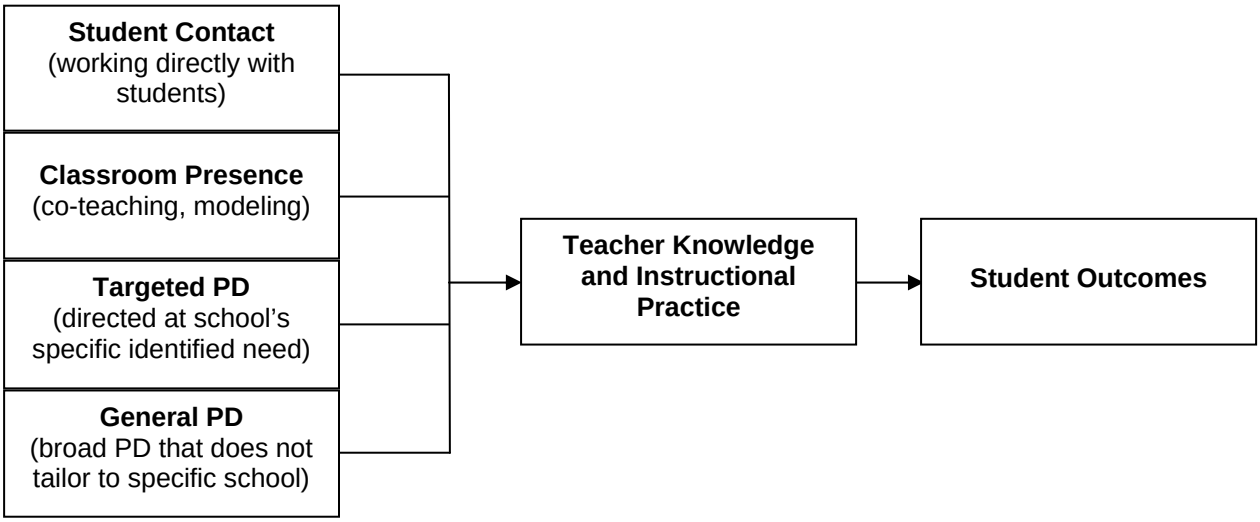
1. What is the impact of FLaRE Coordinators' support on teacher knowledge and student reading performance?

2. What professional development activities predict better teacher and student outcomes?

We used a mixed-methods approach to investigate the two research questions. Impact on students' reading achievement was addressed in two separate quantitative analyses: (a) comparing the outcomes of students in FLaRE schools that received the most comprehensive PD plan to students in schools receiving a low level of PD support, and (b) comparing the outcomes of students in schools receiving comprehensive PD support to schools receiving no FLaRE PD support. Impact on teachers was assessed using a qualitative analysis of interviews with Coordinators and reading coaches.

The second question was examined through quantitative analysis of the relationship between categories of PD activities as reported in Coordinators' monthly logs and student achievement. An additional qualitative analysis was conducted using interviews with Coordinators, reading coaches, and teachers, and classroom observations.

Figure 1: FLaRE Theory of Action



Summary of the Study Design

To draw a conclusion about the impact of FLaRE services on student achievement, it is necessary to compare student achievement in FLaRE schools with the achievement that would have been observed had the schools not received FLaRE services (the counterfactual). The ideal approach would be to randomly assign some schools to receive FLaRE services and others to serve as a comparison, but this is not feasible, since all eligible schools have already been given the opportunity to participate. Additionally, we recognize that Florida has been among the leaders in innovation in reading instruction and as such has promoted the concept of reading as a "core value" in the state. With this effort—and with the requirements of No Child Left Behind—has come both supports for reading improvement and pressures to improve. The ways in which districts and schools have taken advantage of supports and responded to pressures adds an element of context that must be considered along with the straightforward variables such as demographics and test scores that are used to match schools for research purposes.

Thus, we used a comparative time series design (Bloom, 1999; Shadish, Cook, & Campbell, 2002), comparing the achievement in schools participating in FLaRE during the years after they began participation with the achievement in these same schools during the years prior to participation. If achievement after receipt of FLaRE services is higher than achievement before, this would lend support to the claim that FLaRE services had an impact. Also, to strengthen the conclusions that can be drawn, we conducted separate interrupted time series analyses for schools receiving different levels of FLaRe services. If FLaRE services have an impact, we would anticipate seeing a larger improvement in achievement after receipt of FLaRE services for schools receiving FLaRE Level 1 (highest level of support) than for schools receiving FLaRE Level 3 (lowest level of support).

To account for the possibility that affiliation with FLaRE rather than a specific level of service sparked instructional progress and consequently affected student outcomes, we have identified and compared matched FLaRE and non-FLaRE schools using the same comparative time series design model. However, in both comparisons detailed above, the "business as usual" condition (the comparison groups) may have received alternative sources of support that did not exist in FLaRE schools.

In addition to the impact analysis described above, we have collected qualitative data to better understand the impact of FLaRE services on coaches, teachers, and students. These data were used to understand the quantitative findings in the context of the amount of various types of PD activities conducted in FLaRE schools, and the conditions that facilitated or inhibited the impact of FLaRE PD.

The design of this study is summarized on the following page. More in-depth information about the design and outcome measures is provided in Chapter 2.

Content and Organization of This Report

Chapter 2 includes a description of how the study was conducted; it details the sample, research design, and outcomes analyzed. Chapter 3 focuses on the impact on students and teachers; this chapter includes an analysis of trends over time of students' reading achievement as well as qualitative data gathered through interviews with reading coaches and FLaRE Coordinators. Chapter 4 describes the analysis of the types of Coordinators' support that are associated with improved teacher knowledge and student outcomes; this chapter reports on the results of a quantitative analysis linking hours of PD activities to reading achievement, and on additional qualitative analysis of interviews and classroom observations. Chapter 5 presents conclusions and policy recommendations based on the study results.

Study Design Summary

Comparison by Intensity of Professional Development

Participants: Nine FLaRE Coordinators, 12 reading coaches, and five cohorts of students in 24 schools were included in this comparison. The participating cohorts (a total of 44,397 students) took the FCAT Reading Grade 10 assessment from 2004 through 2008. The schools selected for the study were high schools serving predominantly high-poverty ethnic minority populations.

Research Design: Matched pairs of FLaRE Level 1 and Level 3 schools within the same county and with the same Coordinator were identified based on baseline academic achievement, school size, and demographic characteristics. The Level 1 group (intervention group) consisted of 14 schools, whereas the Level 3 group (comparison group) consisted of 10 schools. This is because some of the comparison schools were matched to multiple similar intervention schools. Because of the low number of multiple uses of comparison schools, this approach does not jeopardize the HLM model. We obtained data from Coordinators' monthly logs for the 2007–08 school year. Interviews with Coordinators and reading coaches were conducted during the winter and spring of the 2007–08 school year. Site visits to two school sites were conducted during the spring of 2007–08.

Outcomes Analyzed: The study examined impact on students' FCAT Reading Grade 10 total scores, sub-scale scores, and Norm-Referenced Test (NRT) scores. In addition, the study analyzed perceptions of PD needs and FLaRE implementation as expressed by Coordinators and reading coaches.

Comparison to Non-FLaRE Schools

Participants: Five cohorts of students from 52 schools were included in this comparison. These cohorts (a total of 126,229 students) took the FCAT Grade 10 assessment from 2004 through 2008. The schools selected for the study were high schools serving predominantly high-poverty ethnic minority populations.

Research Design: Matched pairs of FLaRE and Non-FLaRE schools in the same county and with the same Coordinator were identified based on baseline academic achievement, school size, and demographic characteristics. The intervention group consisted of 29 Level 1 schools, whereas the comparison group consisted of 23 Non-FLaRE schools. As with the study discussed above, this is because some of the comparison schools were matched to multiple similar intervention schools. And again, the low number of multiple uses of comparison schools ensures that the HLM model is unaffected by this technique.

Outcomes Analyzed: This study examined impact on students' FCAT Reading Grade 10 total scores, sub-scale scores, and Norm-Referenced Test (NRT) scores. Additional analyses were conducted that compared intensity of PD received within four categories of PD, with data obtained from Coordinators' logs. The four categories were: student contact, classroom presence, targeted PD, and general PD. Student-level and school-level data were used to identify the categories of PD which made an impact on student reading scores. Additional analyses included the entire population of FLaRE schools by school type.

Impact on Teachers' Instructional Practices: An Observational Approach

Participants: A random sample of 85 students (and their teachers) from 14 intensive reading classes in four FLaRE Level 1 high schools participated in the study, along with 12 of those schools' reading coaches. The four schools were selected based on a relatively high level of FLaRE services during the 2007–08 school year, and a low level of staff turnover between 2007–08 and 2008–09.

Research Design: Observations of intensive reading classrooms and interviews with reading teachers and coaches were conducted in four schools in October and November of the 2008–09 school year. Schools were selected for site visits based on six criteria that ranged from logistical considerations (travel distance) to and on their ability to facilitate.

Outcomes Analyzed: Each classroom was observed by two independent observers, who recorded student behavior and teacher instructional practice. Follow-up interviews with the teachers and reading coaches focused on the literacy needs of students and on professional development needs.

Chapter 2: Study Sample and Design

This chapter describes the sources of data, the impact measures created from the data, and the analytic methods used to assess program impact. The results of the analyses are described in Chapter 3.

The quantitative component of the study compared student test scores from the same schools before and after FLaRE implementation, and student scores at schools that were receiving different levels of FLaRE services but that were otherwise similar—including being located in the same county, and receiving PD from the same FLaRE Coordinator. This careful matching helped us isolate the potential effect of the program itself by eliminating confounding differences caused by factors such as geographic location in the state or differing approaches (or levels of skill) of different Coordinators.

Participants

This study focuses on the high school level. This is for several reasons. The majority of schools receiving FLaRE support are high schools (78% in 2006–07, 79% in 2007–08, and 62% in 2008–09); this larger pool of high schools (vs. elementary or middle schools) facilitates the matching of treatment and comparison schools within the same county and under the same Coordinator. Holding the county and the Coordinator constant is critical for the analysis's ability to allow conclusions about differences in student performance. Another reason for the focus on high schools stems from the high needs of these schools for additional literacy support. For example, in 2007–08, only 48% of high school students in FLaRE schools met the highest reading standards, compared with a state-wide average of 69%. Additionally, the percentage of high school students making gains in reading (56%) and the percentage of the lowest 25% making gains in reading (50%) were low compared to respective state averages (64% for gains in reading; 62% for the lowest 25% of students making gains). Finally, according to the 2007 *Lessons Learned* report (Florida Department of Education, 2007a), although most grade levels showed a steady increase (of a small magnitude) between 2001 and 2005, tenth graders' reading achievement decreased. We focused on FLaRE implementation in only one grade to avoid the ambiguity that arises when findings are combined across grades (students in different grades are exposed to different reading tasks, curricular material, and instructional approaches). Therefore, classroom observations were conducted in 10th-grade classroom, and FCAT grade 10 results were examined for the quantitative analysis. We did not differentiate between first-time test takers and re-takers.

The ultimate goal of the sample selection process was to create a sample of schools that would allow us to draw conclusions about the impact the FLaRE PD had on Florida students. The sample selection process detailed below aimed to identify pairs of schools within the same district that matched on academic and demographic variables but differed in FLaRE support. Specifically, we looked for pairs FLaRE Level 1 matched to FLaRE Level 3, and for pairs of FLaRE Level 1 matched to non-FLaRE schools. The process of selecting schools for inclusion in the study involved a four-step process detailed below.

Step 1: Define the population. In 2007–08 FLaRE Coordinators provided PD support to 150 Level 1 high schools and 33 Level 3 high schools. At the time of the sample selection, 16 FLaRE Coordinators served both Level 1 and Level 3 schools; these Coordinators provided PD to a total of 28 Level 3 FLaRE high schools. Therefore, for the sample selection for the comparison of Level 1 to Level 3 schools, we explored how many of the 28 Level 3 schools match Level 1 schools. For the sample selection for the FLaRE versus non-FLaRE comparison, we explored how many of the high schools across Florida with a school grade of C, D, or F, which did not have Level 1, 2, or 3 contract with FLaRE (77 schools in total in 2007–08), matched FLaRE Level 1 schools.

Step 2: Identify matched pairs. To identify matched schools, we obtained school-level data available from the Florida Department of Education website and Common Core of Data (CCD) to find matching Level 1

schools. Caliper matching (Cochran & Rubin, 1973) was utilized to select matched pairs of intervention and comparison schools. This method requires identifying relevant characteristics and the tolerance level for matching distance for each characteristic. A computer program compared academic achievement (Developmental Scale Scores) in the three baseline years, and demographic characteristics in the three baseline years (2004–2006) and the two intervention years (2007–2008). The demographic characteristics included school size, percentage of white, Hispanic, and black students, and percentage of students eligible for the free/reduced-price lunch price program. Of the 28 Level 3 schools that were identified in the section above, 14 high Level 3 schools matched 18 Level 1 schools served by the same Coordinator on both baseline academic performance and current school size and socio-demographic characteristics. In addition, of the 77 non-FLaRE schools discussed above, 18 schools matched 23 Level 1 schools within the same district. In both samples, the number of comparison schools was lower than the number of intervention schools. Since matching was done in pairs, few of the comparison schools were matched to more than one intervention school. It should be noted that we also explored the possibility of matching triads of schools (Level 1, Level 2, and Level 3); however, because of the low number of Level 2 high schools (59 in 2007–08), the number of resulting matches was too low to detect differences in achievement. Therefore, Level 2 schools were not included in this study.

Step 3: Remove schools with extreme lack of implementation. Coordinators' logs were examined for the identified matched pairs of schools. Four Level 1 schools (the highest level of support) with an extreme lack of implementation between October 2007 and May 2008 (defined as less than three hours of total Coordinator support per month) and their matched comparison schools were removed from the sample resulting in a sample of 14 Level 1 schools matched to 10 Level 3 schools in the comparison by FLaRE analysis. This ensured that the sample of Level 1 schools was not biased by the inclusion of schools that were Level 1 in name only, and not actually benefitting from the intended PD. All selected schools were high schools serving predominantly high-poverty ethnic minority populations.

Step 4: Verify history of FLaRE services. Additional data were collected from the FLaRE Center and from interviews with Coordinators and coaches to verify that FLaRE services began in 2006–07 and had a similar degree of intensity during the first and second year of FLaRE support; this information was important to verify the assignment of schools to study conditions, as only beginning in 2007–08 was there a formal distinction between three levels of PD support.

This study included a comparison by intensity of FLaRE support (Level 1 versus Level 3) and a comparison to a true comparison group (i.e., FLaRE versus non-FLaRE schools). For the comparison by intensity of professional development, we included five cohorts of students in 24 schools across Florida (14 Level 1 schools compared to 10 Level 3 schools). The participating cohorts (a total of 44,397 students) took the FCAT Reading Grade 10 assessment during the years 2004–2008. To interpret findings in context, monthly interviews were conducted with all nine FLaRE Coordinators serving these schools between February and June 2008. We also approached the reading coaches of the 14 Level 1 schools: two reading coaches declined participation in the study; therefore interviews were conducted with 12 reading coaches from 12 of the 14 Level 1 schools. In addition, site visits to two of the Level 1 schools were conducted to observe instruction in reading classrooms.

For the comparison to a non-intervention group (FLaRE versus non-FLaRE), five cohorts of students from 41 schools across Florida participated in this study. These cohorts (a total of 126,229 students) took the FCAT Grade 10 assessment during the years 2004–2008. The intervention group consisted of 23 Level 1 schools, and the comparison group consisted of 18 Non-FLaRE schools.

Additional schools were selected for site visits. Schools were selected based on these six criteria:

1. Being among the FLaRE Level 1 schools receiving the highest level of support in 2007–08 from Area Coordinators.

2. Coordinators worked closely with the reading coaches and teachers in the school.
3. Coordinators provided support to improve instruction in intensive reading classes.
4. Alternative, charter, and magnet schools were excluded due to possible confounding effects.
5. Schools in the northern part of the state were excluded because of travel limitations.
6. Schools with staff turnover (e.g., new school principal, new reading coach) that may have caused recent interruptions in FLaRE support were excluded because of possible confounding effects.

Nine schools met all six criteria; of these, five schools declined participation and four schools were visited. A random sample of 85 students from 17 intensive reading classes (5 students per class) in these four FLaRE Level 1 high schools participated in the study, along with their 14 teachers and the schools' reading coaches.

Sample Characteristics and Initial Equivalence

Table 1 presents baseline characteristics in 2005–06 (a year before the beginning of FLaRE support) for the 24 high schools participating in the analysis comparing Level 1 and Level 3 schools. Schools were matched in pairs within the same county and with the same Coordinator, and therefore were similar in terms of district and Coordinator characteristics. Overall, the table shows that there is a high degree of similarity in student characteristics between the Level 1 and Level 3 schools selected for this analysis.

Table 1. Baseline School Characteristics, 2005–06 Academic Year, Level I and Level 3 Schools

	Level 1			Level 3		
Variable name	**N**	**Mean**	**SD**	**N**	**Mean**	**SD**
Developmental Scale Score	5,399	1,853.44	307.72	3,862	1,829.46	311.32
Florida Comprehensive Assessment Test	5,399	286.53	56.88	3,862	282.10	57.54
African American	5,397	0.23	0.42	3,860	0.24	0.43
Hispanic	5,397	0.16	0.37	3,860	0.22	0.42
Other Ethnicity	5,397	0.05	0.21	3,860	0.05	0.21
Female	5,399	0.52	0.50	3,862	0.50	0.50
Home Language—Spanish	5,399	0.12	0.33	3,862	0.16	0.37
Home Language—Other	5,399	0.05	0.21	3,862	0.07	0.25
Free & Reduced-Price Lunch	5,275	0.41	0.49	3,762	0.44	0.50
ELL Status	5,275	0.12	0.33	3,762	0.17	0.38
Special Education Status	5,399	0.13	0.33	3,862	0.12	0.33
Gifted Status	5,399	0.02	0.12	3,862	0.01	0.09

SOURCE: Student records for 24 high schools in 8 schools districts for 2005–2006 (most recent baseline year, prior to the start of FLaRE PD)

NOTES: The mean value of dichotomous variables represents the percentage of cases with the value of 1. For these variables the Pearson's Chi-squared test is reported. For the continuous variables the T-test is reported. There was no statistically significant difference between Level 1 and Level 3 schools on average developmental scale scores and students characteristics.

Table 2 presents baseline characteristics of the schools in the FLaRE vs. non-FLaRE analysis for the 2005–06 school year, which was the last baseline year before the beginning of FLaRE support to the sample schools. Schools were matched in pairs within county and therefore were similar in terms of

district characteristics. Overall, Table 2 indicates that there is a high degree of similarity between the intervention and comparison schools selected for this analysis. The groups did not differ significantly on any of the academic or demographic measures in each of the three baseline years. As can be seen in both Table 1 and Table 2, the difference between the mean Developmental Scale Scores of the intervention and comparison groups is smaller than 77 points in each of the baseline years; since 77 points is the equivalent of one year's growth on the FCAT developmental scale (Florida Department of Education, 2007b), the difference between the intervention and comparison group (i.e., Level 1 compared to Level 3; FLaRE compared to non-FLaRE) was neither statistically significant nor educationally meaningful.

Table 2. Baseline School Characteristics for FLaRE and Non-FLaRE High Schools

	FLaRE			Non-FLaRE		
Variable name	**N**	**Mean**	**SD**	**N**	**Mean**	**SD**
Developmental Scale Score	12,674	1,831.44	314.03	8,902	1,882.47	310.27
Florida Comprehensive Assessment Test	12,674	282.47	58.04	8,902	291.9	57.35
African American	12,674	0.39	0.49	8,899	0.24	0.43
Hispanic	12,674	0.35	0.48	8,899	0.35	0.48
Other Ethnicity	12,674	0.03	0.17	8,899	0.03	0.18
Female	12,674	0.51	0.5	8,902	0.51	0.50
Home Language—Spanish	12,674	0.31	0.46	8,902	0.31	0.46
Home Language—Other	12,674	0.10	0.30	8,902	0.04	0.19
Free & Reduced-Price Lunch	12,674	0.48	0.50	8,668	0.39	0.49
ELL Status	12,674	0.33	0.47	8,668	0.28	0.45
Special Education Status	12,674	0.10	0.30	8,901	0.12	0.32
Gifted Status	12,674	0.03	0.16	8,901	0.04	0.21

SOURCE: Student records for 41 high schools in 10 schools districts for 2005–2006 (most recent baseline year, prior to the start of FLaRE PD)

NOTES: The mean value of dichotomous variables represents the percentage of cases with the value of 1. For these variables the Pearson's Chi-squared test is reported. For the continuous variables the T-test is reported. There was no statistically significant difference between FLaRE and non-FLaRE schools on average developmental scale scores and students characteristics.

Sample Size and Statistical Power

An important goal for the design of the evaluation of FLaRE was to ensure that the sample sizes would be sufficient to allow for estimates of even small impacts on FCAT reading test scores. How large the sample needed to be was a function of how much variation in scores there was from one year to the next. The larger this variation, the harder it would be to be sure any observed score changes were not due to chance, and the larger the sample would need to be to overcome this concern. We found that the variance between cohorts included in this study was low, and therefore, 11 schools per condition and 225 test takers per school would be sufficient to obtain a minimum detectable effect size of 0.25. Since a larger number of schools was obtained in the analyses we performed, we could detect even smaller impacts (0.22 for the analysis comparing FLaRE Level 1 and 3 schools, and 0.17 for the analysis comparing FLaRE and non-FLaRE schools).

Sample Representativeness

One criterion for sample selection was matching intervention and comparison schools on multiple characteristics. Another important criterion was making sure that the sample was representative of the

population of FLaRE schools in terms of the intensity of the different types of services provided by FLaRE coordinators. As shown in Table 3, the schools selected for this study were sufficiently representative of the state-wide population of Level 1 FLaRE high schools.

Table 3. Comparison Between FLaRE and Non-FLaRE School Characteristics

	Intervention Group (Comparison by Level)	Intervention Group (Comparison to Non-FLaRE)	Population (State-Wide)	Comparison Group (Intensity Comparison)	Comparison Group (Comparison to Non-FLaRE)	Population (State-Wide)
	N=14	N=23	N=150	N=10	N=18	N=33
Student Contact	1.64	1.44	1.50	0.12	NA	0.14
Classroom Presence	1.33	1.82	1.64	0.15	NA	0.77
Targeted PD	2.15	1.90	1.73	0.12	NA	0.60
General PD	8.15	7.38	6.60	1.57	NA	2.21

SOURCE: 2007–2008 monthly Coordinators' logs.
NOTES: NA = Non applicable.

Measures

PD Intensity: To measure PD intensity, we relied on coordinator's logs. Coordinators' logs are completed on a monthly basis as part of Coordinators' routine reporting to the FLaRE Center. We collected these logs for all FLaRE Coordinators for 2007–08. Logs for October through May were analyzed for content. The Coordinators completed logs in a narrative format until the end of December 2007. Starting in January 2008, Coordinators' logs were in a more structured format in which activities were selected from pull-down menus and hours reported for each type of activity. In addition to selecting the exact type of activity (e.g., direct assistance in refining an initial area of concern), Coordinators could add notes about the content of the activity (e.g., studied survey data to refine understanding of area of concern—print-rich environment). Content of the logs was analyzed by three trained coders. Four main categories emerged from the logs: general professional development, targeted professional development, classroom presence, and student contact. Coders recorded the number of hours reported per school per month for each category of activity and calculated average across month for each school by PD category.

Students' Reading Achievement: To measure student achievement, we used the Florida Comprehensive Assessment Test® (FCAT) Reading test. The Florida Comprehensive Assessment Test® (FCAT) is part of Florida's overall plan to increase student achievement by implementing higher standards. The FCAT, administered to students in Grades 3-11, consists of criterion-referenced tests (CRT) measuring selected benchmarks in mathematics, reading, science, and writing from the Sunshine State Standards (SSS).

This study focused on the FCAT reading for grade 10. FCAT Reading results are reported by Achievement Levels based on their scale scores, and, after conversion, their developmental scale scores. Scale scores, ranging from 100 to 500 for each grade level, are converted to developmental scale scores, which place the scores of students on a scale ranging from 0 to 3000 for all grade levels tested. For the purpose of this study, we used the developmental scale scores to test overall impact. Developmental scale scores (DSS) were obtained for three baseline years (2004–2006) and two intervention years (2007–2008).

The FCAT also includes norm-referenced tests (NRT) in reading comprehension. NRT scores were obtained for the years 2005–2008, when the Stanford Achievement Test Series, Tenth Edition (Stanford 10 or SAT10) was used. Both the DSS and the NRT parts were included in this study. For the FCAT reading NRT, percentile ranking and Normal Curve Equivalent Scores were examined.

In addition to assessing impact on total reading scores, it was of interest to examine the possibility of differential effects of specific sub-sets of the test. Therefore, SSS subscale scores for the FCAT reading grade 10 were used to examine the following reading skills:

- **Words and Phrases in Context:** The student selects and uses strategies to understand words and text; makes and confirms inferences from a reading text; interprets data presentations (e.g., maps, diagrams, graphs, and statistical illustrations).
- **Main Idea, Plot, and Purpose:** Determines stated or implied main idea; identifies relevant details; identifies methods of development; determines author's purpose and point of view; identifies devices of persuasion and methods of appeal; identifies and analyzes complex elements of plot (e.g., setting, tone, major events, and conflicts and resolutions).
- **Comparisons and Cause/Effect:** Recognizes the use of comparison and contrast; recognizes cause-and-effect relationships.
- **Reference/Research:** Locates, gathers, analyzes, and evaluates information for a variety of purposes; selects and uses appropriate study and research skills and tools according to the type of information being gathered or organized; analyzes the validity and reliability of primary source information and uses the information appropriately; synthesizes information from multiple sources to draw conclusions.

Student-level FCAT scores were analyzed for the 24 schools included in the comparison by Level of FLaRE service plan and for the 41 schools included in the comparison of FLaRE to non-FLaRE schools. However, for the analysis of the relationship of PD support to students reading achievement we have included Coordinators' logs data for the entire population of 150 Level 1 FLaRE high schools; for this analysis, because students-level data were not available for this large number of schools, school-level data of the percentage of students performing at grade level were used.

To supplement the quantitative analysis of achievement scores and provide a more detailed picture of the FLaRE intervention, we interviewed FLaRE Area Coordinators and school reading coaches and conducted site visits to schools receiving FLaRE support.

Interviews With Area Coordinators: We conducted five interviews with each coordinator to learn about (a) the level of FLaRE support during the first year of FLaRE, (b) professional development and support provided to promote vocabulary, reading comprehension, and student motivation and engagement, (c) challenges encountered in the school, and (d) any additional support or literacy initiatives occurring at the school at the same time. See Appendix A for interview protocols.

Interviews With Reading Coaches: We also conducted one interview with reading coaches in the FLaRE Level 1 schools to learn about the schools' literacy needs and the type of support received from the coaches. See Appendix B for interview protocols.

Site Visits: We conducted site visits in a sample of four Level 1 high schools. See Appendix C for site visit protocols detailing classroom observations and follow-up interviews with teachers and reading coaches. Each site visit lasted two days and included all intensive reading classes in the school. In one school, one of the intensive reading teachers was not present; her classes were excluded from the sample. The purpose of the site visits was to gain a better understanding of how teachers connect students' needs to knowledge of instructional practices and how teachers and reading coaches define their professional development needs versus the support provided by the FLaRE Coordinator.

Analysis Plan

To estimate the impact of Level 1 FLaRE services relative to the impact of Level 3 services, we used a comparative time series model that takes into account clustering within school in terms of students' demographic characteristics and academic achievement. Under this model the impacts of FLaRE Level 1 and Level 3 services are estimated by measuring the extent to which student achievement in each pair of matched schools increased relative to its pre-program trend (Bloom, 1999). For each FLaRE level, the counterfactual is obtained by projecting what student performance would have been in the absence of the reform. Because only three preprogram observations were available to estimate these projections, we fit a baseline mean model as suggested by Bloom (2001).

To control for systematic differences over time in the background characteristics of student cohorts, we included student characteristics such as ethnicity indicators, free or reduced-price lunch indicators, language classification, special education status, and a dummy indicator that captures whether the student's home language is Spanish or not.

Because the analysis involves students nested in schools, we estimated the model using a hierarchical linear model. In conducting the HLM analysis, the first step was to examine patterns in Level 1 FLaRE schools before and after FLaRE. The second step repeated the first step for the FLaRE Level 3 schools before and after the same interruption year. The third step was to calculate the difference between the changes in outcomes for students in the Level 1 schools and for students in the Level 3 schools. The difference between the schools in their growth (differences over time) is the estimate of the benefit of being in an intervention school to the students within the school. This is often called the "difference in differences." The last step combines the impact estimates from multiple sets of matched intervention and comparison schools. The three-level random effects HLM model we used is specified below.[1]

Level 1: Individual Student Level

(1)

$$Y_{ijk} = \alpha_{jk} + \beta_1 eblack_{ijk} + \beta_2 ehispa_{ijk} + \beta_3 eother_{ijk} + \beta_4 female_{ijk} + \beta_{5ijk} hlspa +$$
$$+\beta_6 hloth_{ijk} + \beta_7 lunch_{ijk} + \beta_8 everlep_{ijk} + \beta_9 eversped_{ijk} + \beta_{10} gifted_{ijk} + \varepsilon_{ijk}$$

Where:

Y_{ijk} = the outcome for student i, in cohort j, from school pair k.

ε_{ijk} = a random error term for student i in cohort j from school pair k (assumed independently and identically distributed (iid) across students in a cohort).

All of the student-level background characteristics are grand-mean-centered for student *i* in cohort *j* from school pair *k*.

[1] The original three-level HLM equations included in the proposal were designed for a simple model in which each Level 1 FLaRE school has a single comparison school or a matched pair. However, after searching for matched Level 3 schools under the matching specifications previously discussed, finding unique matches was not feasible. Additionally, the sample of unique blocks or pairs dropped further after eliminating schools with very low levels of implementation. On the basis of these empirical constraints, we modified the HLM models. Based on exploration of the models, and in consultation with a methodological advisory committee, we specified two HLM models: two-level fixed effects, and three-level random effects. Both models provided consistent results for the parameters of interest.

Level 2: Cohort/School Level (e.g., 10th-grade students over 5 years)

(2)

$$\alpha_{jk} = \pi_{0k} + \pi_{1k}F_{2jk} + \pi_{2k}F_{3jk} + \pi_{3k}F_{4jk} + \pi_{4k}F_{5jk} + \pi_{5k}treat_{jk} + \pi_{6k}treat_{jk}F_{4jk} + \pi_{7k}treat_{jk}F_{5jk} + \upsilon_{jk}$$

Where:

α_{jk} = the mean outcome for cohort *j* from school pair *k* for students with mean background characteristics for cohort *j*'s school. (Cohorts are indexed separately by school; each school contributes five cohorts to the analysis, three prior to the year in which FLaRE was adopted, and two after.)

F_{2jk} = dummy variable equal to 1 for year pre-FLaRE (2004–05); 0 otherwise.

F_{3jk} = dummy variable equal to 1 for third year pre-FLaRE (2005–06); 0 otherwise.

F_{4jk} = dummy variable equal to 1 for first year post-FLaRE (2006–07); 0 otherwise.

F_{5jk} = dummy variable equal to 1 for second year post-FLaRE (2007–08); 0 otherwise.

$treat_{jk}$ = dummy variable equal to 1 if cohort *j* is from an intervention school, pre- or post-FLaRE. 0 otherwise.

υ_{jk} = random error term for cohort *j*, school pair *k*, *iid* across cohorts within school pair.

Level 3: School-Pair Level

(3) $\pi_{0k} = \gamma_{000} + \omega_{00k}$

(4) $\pi_{1k} = \gamma_{100} + \omega_{10k}$

(5) $\pi_{2k} = \gamma_{200} + \omega_{20k}$

(6) $\pi_{3k} = \gamma_{300} + \omega_{30k}$

(7) $\pi_{4k} = \gamma_{400} + \omega_{40k}$

(8) $\pi_{5k} = \gamma_{500} + \omega_{50k}$

(9) $\pi_{6k} = \gamma_{600} + \omega_{60k}$

(10) $\pi_{7k} = \gamma_{700} + \omega_{70k}$

Where $\omega_{00k}, \omega_{10k}, \omega_{20k}, \omega_{30k}, \omega_{40k}, \omega_{50k}, \omega_{60k}, \omega_{70k}$ = random error terms, *iid* across school pairs.

The first level is a simple regression of outcomes for individual students in a single school-specific annual cohort as a function of their background characteristics. The equation is included in the model to control statistically for any compositional shifts that might occur over time in the measured background characteristics of students at a given school.

The second level of the model is the comparative interrupted time-series analysis of regression-adjusted mean outcomes for school-specific cohorts from a pair of schools.

π_{0k} is the regression-adjusted baseline mean student outcome for the two comparison schools combined.

The coefficients $\pi_{1k}, \pi_{2k}, \pi_{3k}, \pi_{4k}$ are included in the model to pick up year-specific effects, in case there is something that happens at the district level that affects both intervention and comparison schools in the same way. While π_{1k}, π_{2k} capture the year-effects for two baseline years (where the academic year 2003–04 works as the reference year), π_{3k}, π_{4k} capture the year specific effects for the two post-FLaRE years.

The coefficient of the "treat" π_{5k}, picks up the difference between the intervention school and that of its comparison schools in the baseline period.[2]

π_{6k}, π_{7k} are the coefficients for the interaction terms between the first post-FLaRE year dummy and the treatment, and between the second post-FLaRE year dummy and the treatment indicator. These coefficients are the differences between the deviations from the baseline mean for the intervention school and its comparison school counterpart—the estimated impacts of transforming the intervention school in the first and second years of participation in FLaRE, respectively. Thus the FLaRE impact estimate for the first post year is $\hat{\pi}_{5k} + \hat{\pi}_{6k}$, and the estimate for the second post year $\hat{\pi}_{5k} + \hat{\pi}_{7k}$.

The error term represent the variation among years for the pre-program years.

The third level represents the distribution of parameters across school pairs, providing a way to summarize these findings. $\pi_{5k}, \pi_{6k}, \pi_{7k}$ are the best available estimates of the typical impacts on a school. The standard deviations of these estimates provide measures of the consistency of these impacts.

The same HLM model was repeated for the analysis comparing FLaRE versus non-FLaRE high schools.

[2] Because the treatment and control schools might differ in average achievement prior to the program even though they were matched.

Chapter 3: Impacts on Student Achievement

This chapter reports on a series of analyses: the impact of FLaRE on FCAT reading grade 10 Developmental Scale Scores (DSS), the impact of FLaRE on four sub-scales of the Sunshine Scale Scores (SSS), the impact on FCAT reading grade 10 Norm Referenced Test Scores (NRT), and the impact of four categories of FLaRE PD activities on the percentages of students reaching the highest standards in reading (i.e., FCAT level 3 or above).

Impact on Students' DSS Scores

The parameter estimates for the HLM model described in Chapter 2, comparing FLaRE Level 1 and Level 3 schools, are presented in Table 4. As shown in this table, individual student characteristics were significant predictors of variation in student achievement. The most pronounced differences were between special education and non-special education students (a difference of 328.6 points), between African American and white students (a difference of 152 points), and between ELL and non-ELL students (a difference of 145 points). Adjusted means and standard deviations for the comparison by FLaRE level are presented in Appendix D.

As indicated in Chapter 2, the model includes variables to represent potential differences across years in the overall level of achievement, with 2003–04 used as the base. When examining the effects of each of the years in the model, only 2007–08 differed significantly from the base year. During this year, the scores of all students were significantly higher than during the base year.

The impact of FLaRE can be determined by examining the interaction of FLaRE participation and year. The interaction was not statistically significant, meaning that the Level 1 and Level 3 schools progressed at a similar rate over the years. Thus, the analysis does not provide evidence that the additional supported provided in FLaRE Level 1 resulted in higher achievement than the support provided in Level 3.

Interviews with Coordinators and reading coaches provided additional information about the schools included in the comparison of Level 1 to Level 3 schools, and allowed us to identify pairs of schools that might differ by additional factors other than the existence of FLaRE support: in one pair the comparison school had another PD program in place; in a second pair, the intervention school experienced principal turnover and layoff notices to several teachers that caused turmoil in the school; and in four other pairs one of the schools in the pair was an alternative or charter school. An analysis of the student outcomes of the remaining eight pairs of schools replicated the results reported here, indicating that the unique characteristics and events that occurred in these pairs did not mask results in the other pairs.

Table 4: Three-Level HLM Model With School Random Effects: Comparison by FLaRE Level

	3-Level Model			
Fixed Coefficients	**Point Estimate**	**SE**	***t-ratio***	***p*-value**
Intercept	1,840.85	15.69	117.32	0.000
Female vs. Male	12.01	2.57	4.68	0.000
Home Language—Other (reference English)	3.07	7.50	0.41	0.682
Home Language—Spanish (reference English)	–21.69	7.01	–3.09	0.002
ELL vs. Non-ELL	–145.08	6.06	–23.95	0.000
Free & Reduced-Price Lunch vs. No Lunch	–62.69	2.83	–22.16	0.000
Gifted vs. Non-Gifted	294.24	10.08	29.2	0.000
Special Education vs. Non-SPED	–328.60	3.90	–84.27	0.000
African American (reference White)	–152.11	3.60	–42.23	0.000
Hispanic (reference White)	–63.38	5.79	–10.94	0.000
Other Ethnicity (reference White)	–14.79	6.54	–2.26	0.024
Year_2004–05	–5.75	8.10	–0.71	0.478
Year_2005–06	–5.45	7.96	–0.68	0.494
Year_2006–07	5.46	11.11	0.49	0.623
Year_2007–08	53.82	11.15	4.83	0.000
FLaRE (Level 1 vs. Level 3)	25.89	19.56	1.32	0.199
Year_2006–07 *FLaRE	9.28	13.18	0.7	0.482
Year_2007–08 *FLaRE	–8.00	13.24	–0.6	0.546
Random Coefficients	**Estimate Variance**	**SE**	**z value**	***p*-value**
Residual Level 1	70,574.00	478.08	147.62	0.000
UN(1,1) Level 2	517.68	111.80	4.63	0.000
UN(1,1) Level 3	1,945.43	661.17	2.94	0.002

SOURCE: Student records from 24 high schools in 8 schools districts for 2003–2004, 2004–2005, 2005–06, 2006–2007, and 2007–08 school years.
NOTE: Ns across the five cohorts respectively for Level 1 and Level 3 schools were 26,388 and 18,009.

We obtained similar findings when examining FLaRE versus non-FLaRE schools. Table 5 presents the results of the analysis for the comparison of FLaRE Level 1 high schools and matched non-FLaRE schools. Adjusted means produced by the HLM analysis and standard deviations for the comparison of FLaRE and non-FLaRE schools are presented in Appendix E.

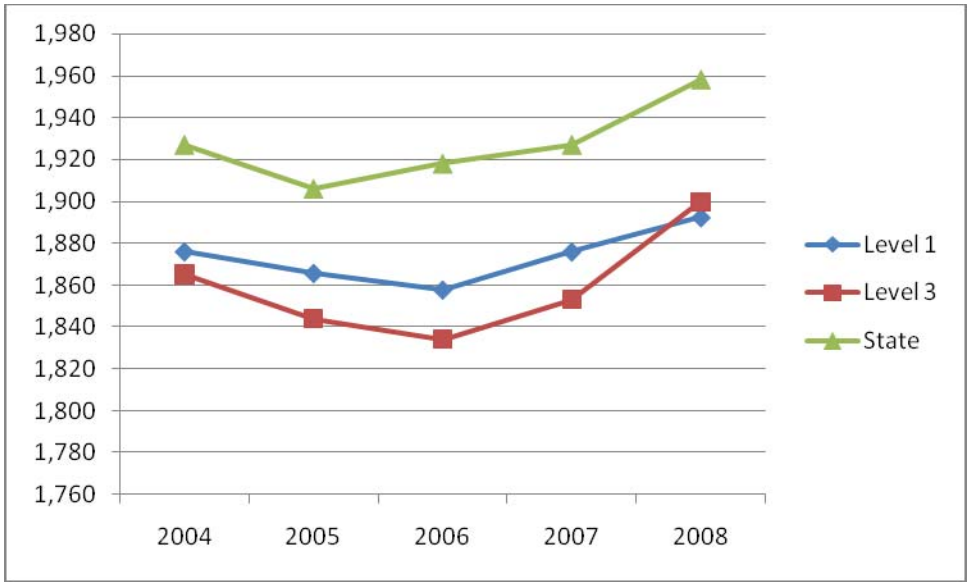
Table 5: Three-Level HLM Model With School Random Effects: Comparison of FLaRE to Non-FLaRE

	3-Level Model			
Fixed Coefficients	**Point Estimate**	**SE**	***t-ratio***	***p*-value**
Intercept	1,861.63	10.72	173.66	0.000
Female vs. Male	10.04	1.69	5.94	0.000
Home Language—Other (reference English)	24.78	4.44	5.58	0.000
Home Language—Spanish (reference English)	–23.18	4.17	–5.56	0.000
ELL vs. Non-ELL	–110.79	3.26	–33.97	0.000
Free & Reduced-Price Lunch vs. No Lunch	–60.21	1.82	–33.01	0.000
Gifted vs. Non-Gifted	323.07	4.33	74.69	0.000
Special Education vs. Non-SPED	–327.28	2.72	–120.54	0.000
African American (reference White)	–192.9	2.87	–67.32	0.000
Hispanic (reference White)	–67.21	3.83	–17.57	0.000
Other Ethnicity (reference White)	–18.85	5.07	–3.72	0.0002
Year_2004–05	–18.1	5.96	–3.04	0.0024
Year_2005–06	1.61	5.98	0.27	0.7877
Year_2006–07	7.85	8.23	0.95	0.34
Year_2007–08	32.9	8.43	3.9	< .0001
FLaRE (FLaRE vs. non-FLaRE)	–9.63	13.51	–0.71	0.4805
Year_2006–07 *FLaRE	–6.04	9.86	–0.61	0.5406
Year_2007–08 *FLaRE	–2.66	10.06	–0.26	0.7912
Random Coefficients	**Estimate Variance**	**SE**	***z value***	***p*-value**
Residual Level 1	71,938.8	317.46	226.61	0.000
UN(1,1) Level 2	548.14	84.55	6.48	0.000
UN(1,1) Level 3	1,586.33	395.4	4.01	0.000

SOURCE: Student records from 41 high schools in 10 schools districts for 2003–2004, 2004–2005, 2005–06, 2006–2007, and 2007–08 school years.
NOTE: Ns across the five cohorts respectively for FLaRE and non-FLaRE schools were 61,033 and 43,545.

FCAT scores may be mapped to five levels of achievement. According to the official FCAT website (http://fcat.fldoe.org/), FCAT a range of 844 to 1851 Developmental Scale score (DSS) is considered to be the lowest level of reading achievement at grade 10 (level 1), and a range of 1852–2067 is considered the second lowest level of achievement for FCAT grade 10 (level 2). To reach grade-level performance, students need to be classified as level 3 or above (a score of 2068 or above). In 2008, the state average DSS in Reading for FCAT grade 10 was 1958. The HLM means adjusted for students' characteristics were respectively 1892 and 1900 for FLaRE Level 1 and Level 3 schools, confirming the low level of performance of these schools relative to the state average.

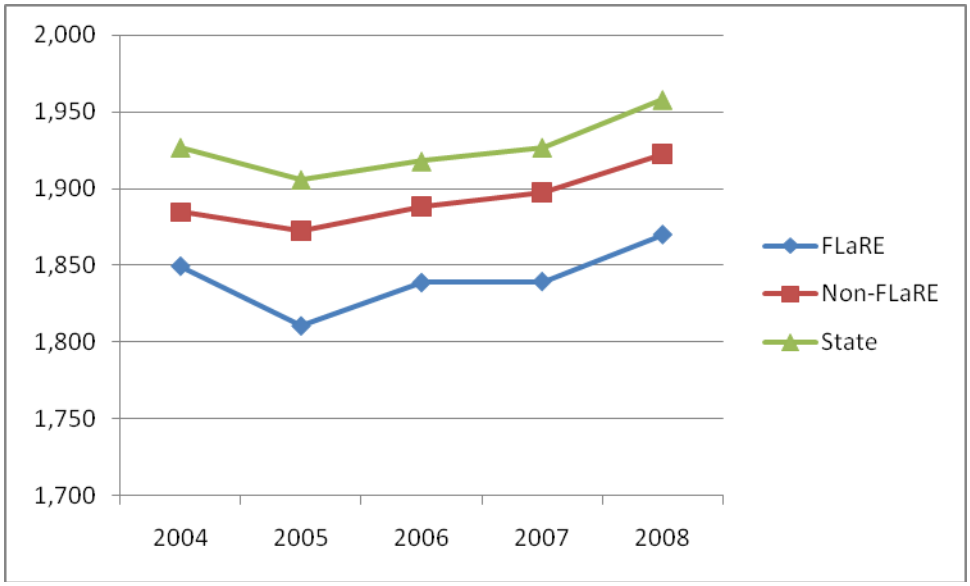
Figure 2. Developmental Scale Scores for FCAT Reading Grade 10 by Year: Comparison by FLaRE Level



SOURCE: Student records from 24 high schools in 8 schools districts for 2003–2004, 2004–2005, 2005–06, 2006–2007, and 2007–08 school years and state-wide means obtained from fcat.fldoe.org.
NOTE: Ns across the five cohorts respectively for Level 1 and Level 3 schools were 26,388 and 18,009.

Figure 2 shows a comparison of average developmental scale scores (DSS) of Level 1 and Level 3 FLaRE high schools and the state average. As Figure 2 shows, the gap between FLaRE schools and the state average widened in 2006, the year before the FLaRE PD begun; while high schools across the state raised their scores in 2006, there was a decrease in scores of FLaRE schools during that baseline year. During the FLaRE PD years (2007, 2008), the positive trend for the scores suggests that FLaRE services may have contributed to the increase in student achievement and helped these low-performing schools align with state-wide trends. However, the increase in scores was similar in Level 1 and Level 3 FLaRE schools. It is possible that district-level PD provided by FLaRE masked some of the school-level PD effects. FLaRE coordinators reported dedicating up to one third of their time to district-level support, which included facilitating a structured course of professional development for cadres of literacy coaches at the district level to help the districts train the coaches, and troubleshooting specific needs of schools in the district. Although Coordinators reported that coaches from Level 3 schools may have attended district-level meeting less often, they could still potentially be impacted by these services.

Figure 3. Developmental Scale Scores for FCAT Reading Grade 10 by Year: Comparison of FLaRE to Non-FLaRE High Schools



SOURCE: Student records from 41 high schools in 10 schools districts for 2003–2004, 2004–2005, 2005–06, 2006–2007, and 2007–08 school years and state-wide means obtained from fcat.fldoe.org.
NOTE: Ns across the five cohorts respectively for FLaRE and non-FLaRE schools were 61,033 and 43,545.
Figure 3 shows average Developmental Scale Scores for the FLaRE versus non-FLaRE comparison. These results show that both FLaRE and non-FLaRE schools experienced a decline in student scores in 2005 and an increase in following years, especially in 2007–08. These trends parallel the state-wide trends in FCAT reading scores.

Cross-Sectional Analyses on the Four Subscales of the FCAT Reading Test

As discussed in Chapter 2, it was of interest to examine whether the similar total FCAT scores masked differences on specific clusters of reading skills. That is, similar total scores could be obtained by across-the-board similarities on all sub-scales, or by very different sub-scale scores that averaged out similarly. Because the scores on the four sub-scales of the FCAT are not comparable across years, we could not conduct an interrupted time series analysis. Instead, we conducted separate cross-sectional HLM regression analyses: one for 2006–07 subscale scores, with the baseline (2005–06) as a covariate, and the second one for 2007–08 subscale scores, with the same baseline (2005–06) as a covariate. As in previous analyses, student demographic characteristics were controlled for in the analysis. Results show that both in the comparison by FLaRE level and comparison between FLaRE and non-FLaRE schools, intervention and comparison schools did not differ on any of the four subscales. Table 6 presents the HLM means adjusted for baseline academic performance and for student demographics and standard deviations for each sub-scale for the comparison of Level 1 to Level 3 schools. Table 7 shows the HLM means and standard deviations for the FLaRE versus non-FLaRE comparison.

Table 6. Adjusted Mean Sub-Scale Scores and Standard Deviations by FLaRE Level and Year

		Adjusted means by academic year					
		Preprogram year		Intervention years			
		2005–06		*2006–07*		*2007–08*	
	FLaRE Levels	Mean	SD	Mean	SD	Mean	SD
Words and Phrases In Context	Level 1	2.88	0.62	3.5	0.63	5.23	0.69
	Level 3	2.83	0.60	3.45	0.60	5.21	0.65
Main Idea, Plot, and Purpose	Level 1	9.98	1.50	9.20	1.50	11.05	1.55
	Level 3	9.71	1.43	9.03	1.45	11.05	1.51
Comparisons and Cause/Effect	Level 1	7.93	1.05	6.52	1.00	5.48	1.05
	Level 3	7.70	0.98	6.39	0.99	5.54	1.01
Reference/Research	Level 1	8.91	1.44	11.51	1.41	7.37	1.46
	Level 3	8.66	1.40	11.21	1.41	7.47	1.42

SOURCE: Subscales of Sunshine Scale Scores from individual student records from 24 high schools in 8 schools districts for 2005–06, 2006–2007, and 2007–08 school years.
NOTE: Ns across the three cohorts respectively for Level 1 and Level 3 schools were 16,034 and 11,075.

Table 7. Adjusted Mean Sub-Scale Scores and Standard Deviations by Study Condition and Year

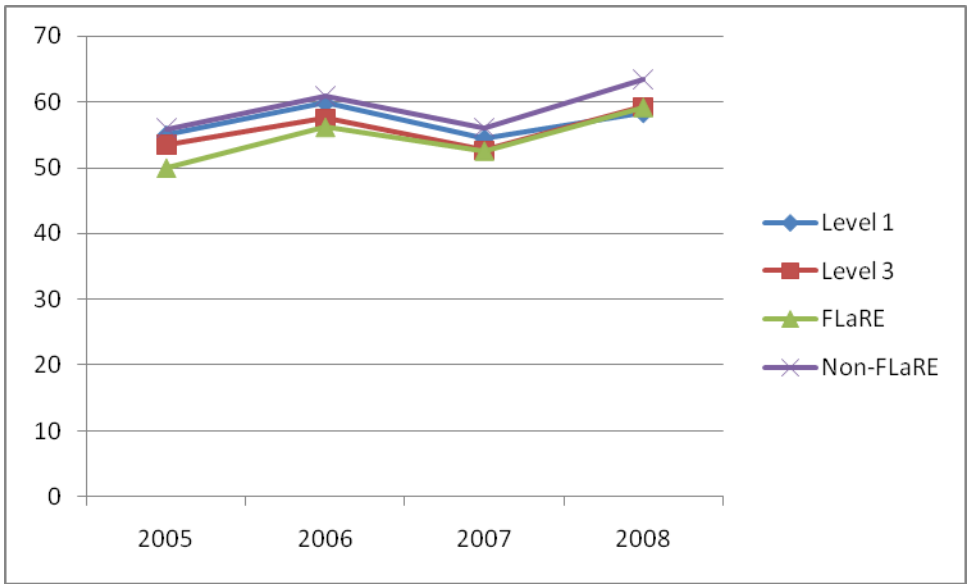
		Adjusted means by academic year					
		Preprogram year		Intervention years			
		2005–06		*2006–07*		*2007–08*	
	FLaRE Levels	Mean	SD	Mean	SD	Mean	SD
Words and Phrases In Context	FLaRE	2.82	0.62	3.37	0.69	5.08	0.73
	Non-FLaRE	3.01	0.67	3.59	0.71	5.34	0.75
Main Idea, Plot, and Purpose	FLaRE	9.69	1.47	8.84	1.66	10.95	1.62
	Non-FLaRE	10.17	1.57	9.41	1.72	11.41	1.67
Comparisons and Cause/Effect	FLaRE	7.79	1.06	6.34	1.12	5.33	1.12
	Non-FLaRE	8.18	1.11	6.69	1.15	5.67	1.13
Reference/Research	FLaRE	8.73	1.44	11.09	1.57	7.16	1.51
	Non-FLaRE	9.19	1.52	11.72	1.59	7.60	1.53

SOURCE: Subscales of Sunshine Scale Scores from individual student records from 41 high schools in 10 schools districts for 2005–06, 2006–2007, and 2007–08 school years.
NOTES: Ns across the three cohorts respectively for FLaRE and non-FLaRE schools were 36,121 and 25,667. Because the content and structure of the four sub-scales changed every year, the means and standard deviations are not comparable across years.

Comparison Using the Norm-Referenced Portion of the FCAT

To examine the potential impact of FLaRE on the norm-referenced portion of the test, we examined the percentile rank for schools in FLaRE Levels 1 and 3, as well as FLaRE and non-FLaRE schools. A look at the FCAT-NRT percentile ranking for the intervention and comparison schools in our study reveals that most schools tend to score above the national average score of 50, and follow similar trends with respect to increase or decrease in ranking relative to the national average across the years (Figure 4).

Figure 4. NRT Percentile Ranking for FCAT Reading Grade 10 by Year

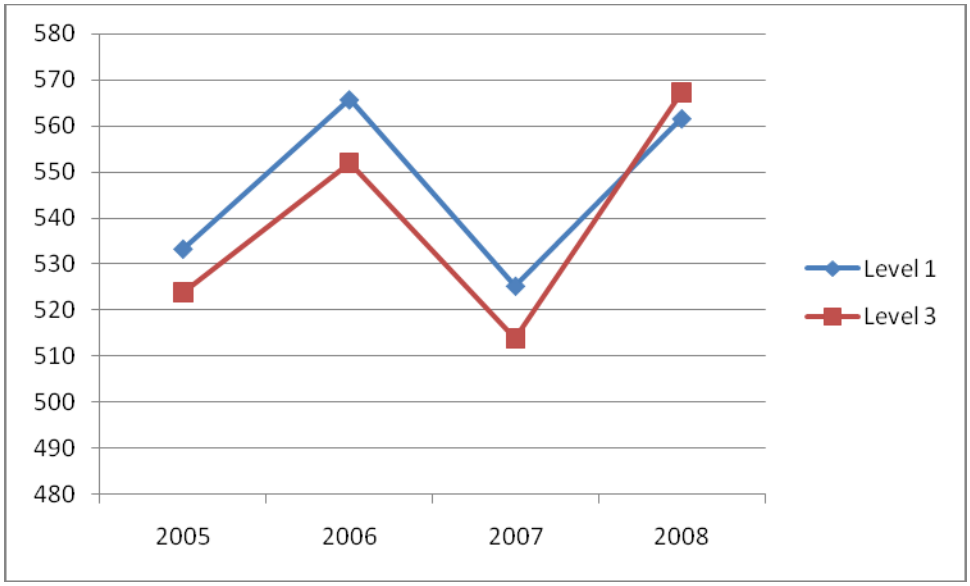


SOURCE: Student records for 2004–05, 2005–06, 2006–2007, and 2007–08 school years.
NOTE: Ns across the four cohorts respectively for the FLaRE Level 1 and Level 3 schools were 21,349 and 14,236 students from 24 schools. Ns across the four cohorts respectively for the FLaRE and non-FLaRE schools were 49,164 and 34,763 students from 41 schools.

Using a similar HLM model to the one used for the DSS scores analysis, we estimated the impact of FLaRE on the norm referenced test portion of the FCAT using Normal Curve Equivalent Scores. For both comparisons (Level 1 vs. Level 3 and FLaRE vs. non-FLaRE), no statistically significant differences were observed between the intervention and comparison groups. As Figure 5 and Figure 6 show, all schools showed decrease in scores between 2006 (baseline) and 2007 (first year of FLaRE) and an increase in 2008 (second year of FLaRE). The trends were parallel in all groups examined.

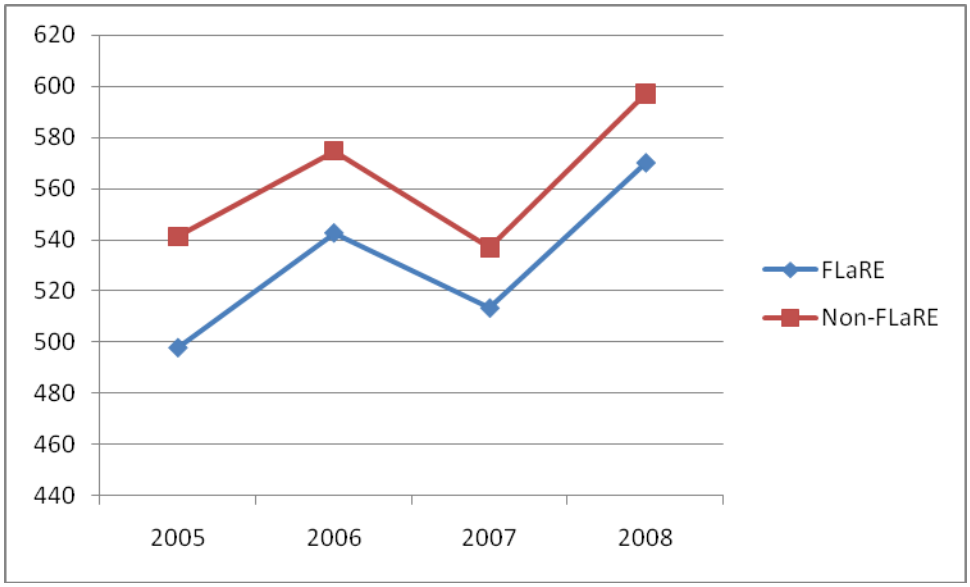
In sum, comparisons of FCAT reading scores of test takers in FLaRE Level 1 compared to FLaRE Level 3 and non-FLaRE schools suggested that professional development provided by FLaRE Coordinators to individual low-performing high schools did not make observable effects on students' reading achievement. The next section addresses the possibility of an alternative explanation to the lack of effect; specifically, we address the likelihood of moderation effects caused by the self-selection of schools to the study conditions. This discussion is then followed by additional analyses aimed to examine whether FLaRE PD had an impact on other student outcomes and on reading coaches and teachers.

Figure 5. Norm Curve Equivalent Scores for FCAT Reading Grade 10 by Year: Comparison by FLaRE Level



SOURCE: Student records for 2004–05, 2005–06, 2006–2007, and 2007–08 school years.
NOTE: Ns across the four cohorts respectively for the FLaRE Level 1 and Level 3 schools were 21,349 and 14,236 students from 24 schools.

Figure 6. Norm Curve Equivalent Scores for FCAT Reading Grade 10 by Year: Comparison of FLaRE to Non-FLaRE



SOURCE: Student records for 2004–05, 2005–06, 2006–2007, and 2007–08 school years.
NOTE: Ns across the four cohorts respectively for the FLaRE and non-FLaRE schools were 49,164 and 34,763 students from 41 schools.

Addressing the Self-Selection Problem

As indicated in Chapter 2, quasi-experimental design studies differ from randomized controlled trials with respect to the ability to rule out alternative explanation for the results observed. For example, the self-selection of schools to FLaRE Level 1 or Level 3 may indicate a difference in additional resources

available to the school or a difference in attitudes towards the program. To account for that possibility, we interviewed FLaRE Coordinators about the matched Level 3 schools included in the sample. The following themes reflect Coordinators' understanding of the reasons some schools selected a Level 3 FLaRE service plan.

Some schools felt pressured to sign a contract with FLaRE; therefore they selected the least comprehensive plan. "They chose Level 3 service basically because they had to choose one and that was the least amount of services they could choose." Other schools felt that they already had the staffing capacity to inform literacy instructional practices in the school. One of the Coordinators noted: "[The reading coach]—I respect her, very well-educated, that's why she chose Level 3 services, she feels she has a handle on things, if she needed something, she'd call me, but I couldn't get in touch with her, couldn't establish a relationship with her." Another Coordinator said: "Coach right out of the classroom, brand new, not at all interested with working with FLaRE. Absolutely, did not want help. Once a month, I send a FLaRE newsletter, offer support, and see her at district coach meetings" A similar explanation was provided by a third Coordinator: "They were assigned to me last year and didn't want a lot of support. They have an active team that has a good relationship with teachers, so they use me as a resource for trainings that coaches are doing."

In some cases, the sense of internal capacity originated both from having qualified staff and from other existing sources of PD that the school focused on. One Coordinator provided the example of the following school: "[The] principal's resistance stemmed from studying another program. The principal felt, with all of that in place, they didn't want to overwhelm the staff, and the coach has her doctorate in reading and has been at the school for quite some time."

In other cases, Coordinator provided examples of cases in which principals selected a Level 3 plan because they were skeptical about FLaRE's ability to help the school. One Coordinator described: "The first time I was able to speak to the principal, and it was quite hard to set up that appointment, he was very tired of people coming in and telling him what to do, and he even made the comment that he challenged me to walk the campus. He told me to bring comfortable shoes because he thought the school was so big, and no one understood it, and he needed me to walk the campus and see it. With their attitude, I was never able to do anything for them. They never wanted my help."

In sum, schools eligible for FLaRE Level 1 support that have selected the lowest level of support or no support at all, may have done so because the principal had in place other plans for literacy instructional improvement at the school. These alternative plans may have been based on having skilled and committed staff and on having other sources of PD support. Therefore, we were not able to rule out the possibility of self-selection as an alternative explanation to the lack of impact found.

Reading Coaches' Perceptions of the Impact of Coordinators' Support on Teacher and Student Outcomes

In this section, we describe the reading coaches' points of view about the impact of FLaRE PD on teacher and student outcomes. Five general areas of impact came up in interviews with reading coaches: use of data, teachers' increased receptiveness to new strategies, improved skills of new teachers, increased teacher collaboration, and greater willingness of content area teachers to incorporate vocabulary and reading comprehension instruction into their lessons. Each of these areas is presented below with sample quotes from coaches:

1. *Use of data*: This PD activity was also one of the most salient changes that reading coaches noted as a result of Coordinators' support. Here are examples of four coaches' descriptions of the change:

- "The biggest change [in teachers' instruction] is that every class uses small group instruction. We all use the data a lot more to drive instruction and to differentiate instruction in small groups."
- "More teachers are comfortable using rubrics, based on the Coordinator's training last year."
- "[The FLaRE Coordinator and I] have looked at data, we co-taught and we did professional development sessions with her about data—teachers have all this data but didn't know what to do with it so we focused on 'now what do I do?' Teachers here are beginning to use data to drive their instruction."
- "I'm hearing from teachers that especially when they got the data, they felt they were able to direct more attention to the students who were struggling with reading."

2. *Receptiveness to new strategies*: Teachers' willingness to accept change and experiment with new strategies is an important precursor of increased self-efficacy, buy-in, and eventually, improved quality of instruction. Coaches noted that following Coordinators' support, teachers became more willing to try new materials, tools, and instructional practices in the classroom:

- "Teachers are getting away from scripted text. They are becoming more creative on their own. They are taking risks."
- "I see more choral reading. I see more read and say in small groups. I feel that the teachers are working with the kids. They're doing are a variety of techniques. They're willing to try something that they weren't willing to try a year ago. Their comfort level has improved, they'll do it."
- "Here the practice had been—you must read these books at this grade level. I tried to persuade them to make them more engaging. It wasn't until she [the Coordinator] came that they listened. It's the first year they're saying, oh it's ok, they don't all have to read the same thing and it'll be alright!"

3. *Improved skills of new teachers*: New teachers are especially vulnerable to experiencing a low sense of efficacy with respect to their ability to address their students' needs. A third area of impact of FLaRE PD noted by coaches is on new hires and teachers who teach intensive reading classes for the first time. In addition, as part of the capacity building efforts, Coordinators worked with schools to increase the number of teachers seeking reading endorsement. Here are descriptions from three reading coaches:

- "[One teacher] had gone from teaching honors to teaching 9th grade intensive reading. From observations we could see that she was struggling implementing remedial reading strategies. The FLaRE Coordinator co-taught with her reciprocal teaching. [She was] getting better."
- "We have a brand-new teacher who's going through his training to pass reading endorsement and he's been working more on vocabulary, he's been doing more read-alouds with students, he really has the students engaged."
- "We have more materials to use for these classes. We now have only one teacher that doesn't have the required reading endorsement. Teachers are more knowledgeable."

4. *Facilitating the establishment and maintenance of a Reading Leadership Team (RLT):* A fourth area of change noted by reading coaches and Coordinators was increased teacher collaboration. Coordinators worked with the school to establish a functional Reading Leadership Team (RLT), and to promote other forms of collaboration such as team teaching, joint planning, and school-wide events. Here is an example from an interview with one reading coach:

- "The team teaching seems to be much stronger. They're more conscientious of wanting the kids do well on the FCAT or do well in selecting the book that they have them read and we do have team meetings once a month with the teachers who work with the FCAT re-takers… What we would do is we would have mini-meetings and the teachers would implement it or share strategies that were working well for them and we got a lot of ideas from each other—it worked really well."

5. *Promoting content area literacy:* All FLaRE coordinators reported that a considerable part of their work was aimed to build knowledge and awareness of reading instruction among content-area teachers. One reason may be that many students were not able to read their text books because they were above their reading level. The CAR-PD (Content Area Professional Development)[3] practicum materials have been a frequent source of support. The results of this FLaRE support may not be reflected in students' FCAT reading scores, but may contribute to students' increased performance in content area subjects such as science, math, and social studies, as reading skills are necessary for academic success in every discipline. In addition, as CAR-PD does not target students performing at FCAT Level 1 or students with fluency and decoding difficulties, the effects of improvements in students' reading skills do not reach those sub-groups.

- "[I have seen changes] with some content areas. Specifically, social studies. They're really involved in reading and writing strategies this year with FLaRE visits… But the reading team is less involved."

- "I have more teachers that are working with CAR-PD teaching reading through language and social studies classes. I attribute this to the FLaRE services; otherwise we wouldn't have heard of these things."

- "The change is that they've figured out how to make their lessons include reading practices more across all content areas."

- "I think they're realizing that reading is not just something that one teacher should be working on, that everyone is a reading teacher, no matter what else they are teaching."

- "She trained me to be a CAR-PD facilitator. Doing that, doing CAR-PD training at our school has really impacted those six teachers I trained. It's like night and day. They had made it a practice to not make their students read. You know, they'd say, I know they're not going to read the social studies book, so I'm not going to make them read it, so I'll just put everything on an overhead on the projector. And I'd say, no, you can jigsaw, or do something else. They're so proud of some of the things that they're doing now."

Perceived Impact on Students

This section describes impact on students as perceived by reading coaches. The majority of the reading coaches did not see substantial improvement in students' FCAT scores, as we found in the quantitative analysis. In the few schools where there was improvement, the coaches and Coordinators noted a high

[3] http://www.justreadflorida.com/CAR-PD/

level of school efforts to advance students' literacy and high use of the Coordinator's recommendations. However, two areas of change were noted by several coaches:

Improvement on Other Academic Indicators of Reading Performance. In one of the schools the reading coach noted: "[Our] biggest success is that our low-level reading numbers are way down. I think the biggest thing is last year—I had five units of READ180 students and now I only have two." As another coach described it: "This is where the struggle always is. When you're measured by FCATs, we may not see a lot of gain. When you're dealing with struggling readers, you're not going to see huge jumps in FCATs. We've seen improvement in their scores that they get on READ180, and the biweekly mini assessments, we've definitely seen improvements there." Students may have made progress on a specific literacy skill—sometimes a basic skill such as decoding or fluency. Targeted assessments of these specific skills may be better able to detect these changes. For example, one coach noted: "Their ORF [Oral Reading Frequency] scores have improved over the last month. A lot of our struggling readers' scores have risen."

Some of the coaches have seen improvement only with respect to individual students as a result of Coordinators' tutoring or teachers' greater efforts to differentiate instruction. One coach said: "I have one student in mind, he's been a struggling reader for 3 years and he's still in READ180, but he has made tremendous gains; he can see a tremendous different in his ability, and he see it's helping him and his self-confidence is increasing. The FLaRE Coordinator has worked with him to make him feel more comfortable in the classroom."

Improved Motivation to Read. Although none of the reading coaches noted increases in students' engagement during class hours, some of them noted that the Coordinators' work has led to improved classroom libraries, students working with a wider variety of engaging texts, and increased general motivation among students to read books. One coach noted: "I can say that students are reading more. Students are definitely in the media center more, checking out more books."

Impact Ratings

We asked Coordinators to rate their perceptions of the impact of their work on teachers, coaches, and use of scientifically based reading research (SBRR) in the sample schools. Coordinators' rated impact on a five-point Likert scale ranging from 1 (limited) to 5 (very strong). The results of this survey are presented below.

Impact on Teacher Knowledge and Practice: Half of the schools included in the sample received a rating of strong or very strong in terms of direct or indirect impact of FLaRE on teachers' knowledge and instructional practices in the classroom. A frequent reason for a lower rating in terms of impact on teachers was the lack of direct contact. In some schools, the Coordinators were not sure that in the absence of direct contact with teachers, they were impacting their knowledge and practice. As one Coordinator explained: "I was not directly invited to provide direct professional development in conjunction with the coach; we were behind the scenes but not in front."

Impact on Reading Coaches' Practice: For more than half (58%) of the schools that employed a reading coach throughout the year, Coordinators gave high ratings with regard to impact on coaches' practices. Several of the Coordinators noted a change in the relationship between the coach and the teachers following their intervention. As one Coordinator noted: "I think it has increased her support of teachers during implementation and increased the time spent co-teaching instead of just doing workshops. I also think it has impacted how teachers interact and collaborate with each other." Two other factors commonly cited as having an impact on coaches were the CAR-PD and building the coach's ability to work with the reading leadership team. Reading coaches generally confirmed this rating. One reading coach noted: "When we first got here the other coach and myself, we were both new reading coaches, FLaRE support

was really geared to teaching us the process by which we are to help the teachers, that is how we used it. Because we didn't have anything to come to the table with any experience in how we were supposed to do this. Our district provided us a lot of resources, we went to monthly district meetings. FLaRE coordinator supported us in meeting our needs at that time and understanding how to communicate between the teachers/with teachers, how to hold conferences, how to talk to the administrators about teachers in a non-evaluative manner. Those things we really needed to see someone do, that is how they supported us. She was teaching us the foundations of being a reading coach."

Impact on Use of SBRR: The Coordinators saw their activities as having a strong or very strong impact on 30% of the schools in the sample with regard to use of scientifically based reading research (SBRR). In those schools, they noted that teachers were implementing research-based practices discussed during trainings with high fidelity. For the remaining schools, the Coordinators did not see any impact or did not follow up with teachers to see if there were changes in their instructional planning and behavior in the classroom.

Table 8. Coordinators' Perception of Teachers' Knowledge, PD Coherence, and Impact of FLaRE

	Mean	SD	Min	Max	% Strong or Very Strong Impact Ratings
Context					
Teacher knowledge	2.65	1.00	1	4	22
Coherence	3.20	1.15	1	5	38
Impact					
On teachers	3.18	1.19	1	5	50
On coaches	3.61	1.20	1	5	58
On use of SBRR	3.00	1.15	1	5	30

SOURCE: Phone interviews with 10 FLaRE Coordinators.
NOTE: Ns or rated schools were 18 Level 1 high schools.

In sum, the qualitative results support the quantitative analysis showing no effect on students' FCAT test scores. However, qualitative data suggest that FLaRE has made a positive impact on other types of student outcomes including the motivation to read and improvement in basic reading skills. In addition, FLaRE PD has made a positive impact on the use of data to inform instruction, teacher collaboration, and instructional practices of reading teachers. Finally, FLaRE PD has promoted content area teachers' awareness of the importance of integrating reading instructions into all content areas.

Chapter 4: Which PD Activities Are Most Effective?

The first part of this chapter discusses the results of a quantitative analysis of the relationship between the amount of time Coordinators spent on the four categories of PD and student reading achievement. For this analysis, data on Coordinator delivery of PD obtained from Coordinators' logs was analyzed for the entire population of high schools receiving Level 1 FLaRE support in 2007–08. School-level data on the percentage of students performing at grade level or above was obtained from the Florida Department of Education website. We conducted a regression analysis controlling for baseline achievement and demographic characteristics. Where a significant correlation between a PD category and achievement outcomes was identified, we determined the predicted amount of PD hours added to the observed average that are needed to increase the number of students performing at grade level by 10%.

The second part of this chapter summarizes the results of a qualitative analysis of the types of activities that Coordinators and coaches thought were most effective. The third part of this chapter lists contextual facilitating and inhibiting factors that may moderate the impact of FLaRE on student achievement. Finally, the fourth part of this section describes the results of analyses based on site visit data, to provide more information about the identification of professional development needs of FLaRE schools.

Predicting the Impact of Additional FLaRE Support

The Coordinators' logs provided detailed information about the number of hours spent by the Coordinator on each type of PD activities for each school. Four main categories of PD data were identified:

Student Contact: The number of hours that Coordinators spent working directly with students as part of modeling instruction in the classrooms, plus assessment and student contact during special events (e.g., book fairs).

Classroom Presence: The number of hours that Coordinators spent observing, modeling, or co-teaching in reading or in content-area classrooms.

Targeted PD: The number of hours Coordinators spent providing support to the Reading Leadership Team or individual teachers (e.g., identifying an area of concern; reflecting on the implementation of the literacy plan of action; utilizing the literacy coach; utilizing the FLaRE website; interpreting and using data; and support in identifying materials, books, tools, and sample lesson plans).

General PD: The number of hours Coordinators spent delivering or facilitating one of the following: reading endorsement in-service, CAR-PD in-service, 4-5 Literacy Academy, in-service about action research, assessment, classroom ecology, differentiating instruction, engaging students in text, study groups, or other conference-format training.

Table 9 provides descriptive statistics on the number of hours per month provided to Level 1 FLaRE schools by school type (elementary, middle, high). Descriptive statistics for FLaRE Level 2 and Level 3 schools are provided in Appendix F. Generally, those statistics show that the amount of PD hours per month does not differ by school type. Although one may expect that high schools, being typically larger and more complex in nature, may need increased support, they do not receive a larger number of PD hours than middle and elementary schools.

Table 9: Hours of FLaRE Coordinators' Support to Level 1 Schools, by School Type

Support Categories	Mean Hours per Month	Standard Deviation	Minimum	Maximum
Elementary Schools, Level 1 (N=13 schools)				
Student Contact	2.45	2.38	0.00	8.29
Classroom Presence	1.63	1.84	0.00	10.00
Targeted PD	0.96	0.88	0.00	3.00
General PD	6.00	4.28	0.25	14.14
Middle Schools, Level 1 (N=47 schools)				
Student Contact	1.43	1.84	0.00	6.13
Classroom Presence	1.10	1.43	0.00	5.50
Targeted PD	1.56	1.90	0.00	10.25
General PD	6.69	6.05	0.00	32.25
High Schools, Level 1 (N=150 schools)				
Student Contact	1.50	1.93	0.00	13.38
Classroom Presence	1.64	2.05	0.00	12.38
Targeted PD	1.73	1.83	0.00	7.94
General PD	6.60	5.12	0.00	25.81

SOURCE: Monthly Coordinators' logs for the academic year 2007–08.

As part of the examination of the relationship between the types of PD Coordinators delivered and student outcomes, we attempted to predict what types and intensities of additional FLaRE support would increase student achievement. We ran a regression analysis controlling for baseline achievement and demographic characteristics to predict the mean number of hours per month needed to increase the number of students reaching the highest standards on the FCAT grade 10 assessment by 10%. As noted in Chapter 2, student FCAT scores are classified into five achievement levels, with 1 being the lowest and 5 being the highest. For school grading purposes, schools earn one point for each percent of students who score in achievement levels 3, 4, or 5 in reading, as these achievement levels represent performance at or above grade level.

Parameter estimates from the regression analysis are presented in Appendix G. A significant correlation between the hours of PD that Coordinators delivered and student outcomes was found only for the lowest quartile of Level 1 high schools in terms of school size (i.e., enrollment of 966 students or less) and the lowest quartile of Level 1 high schools in terms of poverty. Large high schools and high schools with a large proportion of students from a high-poverty background may be facing a considerably larger array of challenges, and for these students, there is no observed link between Coordinator provision of PD activities as examined in this study and students' outcomes.

Hours of additional support required were predicted only for categories of professional development that showed a meaningful correlation with student achievement. As shown in Table 10, for small high schools, we estimated that an addition of 6.5 hours per month to the existing professional development support in the form of observing, co-teaching, or modeling would result in an increase of 10% in the number of students reaching the highest standards in reading. A larger investment in the time devoted to the other types of PD (an additional 16.5 hours per month of targeted PD, or additional 33.5 hours of general PD) would be required to yield an increase of 10% in the number of students reaching the highest standards in reading.

For the FLaRE Level 1 high schools with the least poverty (the quartile with the fewest students eligible for free or reduced-price lunch, 42%), only one category of PD was significantly correlated with a change

in students' outcomes: targeted PD. An additional 11.4 hours of targeted PD per month may result in a 10% increase in the number of students reaching the highest standards in reading.

Table 10: Predicted Number of Additional PD Hours Required to Increase Percentage of Students Reaching Highest Standards on FCAT Reading by 10%

	Hours for 10% Increase	t value	Standard Deviation	*p*-value for Estimated Impact
Small High Schools				
Classroom Presence	6.50	2.64	0.59	0.0094
Targeted PD	16.50	2.35	0.44	0.0206
General PD	33.50	2.59	0.14	0.0106
Less than 42% of students eligible for free/reduced-price lunch				
Targeted PD	11.4	1.8	0.51	0.0748

SOURCE: Monthly Coordinators' logs for the academic year 2007–08 and school accountability reports 2007–08 retrieved from http://schoolgrades.fldoe.org.
NOTE: Predicted hours are shown only for PD activities with a statistically significant correlation with students' reading performance.

Characteristics of Effective PD Activities

Through interviews with Coordinators and reading coaches, we have gathered additional data about the types of PD activities that have led to the largest observable changes in teachers' knowledge, behavior, and attitudes, and student outcomes. Generally, the theme that came up in those interviews paralleled three categories of PD activities described in the prior section: classroom presence, targeted PD, and general PD. These themes and the corresponding categories of PD activities are detailed below.

A. Classroom Presence

All Coordinators felt that going into the classrooms to model and co-teach reading instruction was the most effective type of activity. As one Coordinator noted: "Modeling in classrooms is very important. If you can go in there, show them what you are doing, and then talk about it, is an absolute key."

Several Coordinators noted that it took several follow-ups with the teachers to help them reach the level of understanding needed to integrate the strategy into their classes. A single observation lesson in which the Coordinator modeled a strategy was not always sufficient to have an impact. Coordinators felt that debriefing and follow-up conversations with the reading coach or teachers were an important part of that activity. All of the Coordinator expressed this notion. Here are examples of how two Coordinators phrased it: "Modeling, not just in classrooms, but modeling for the reading coach (the observe, confer, and debrief model of coaching) are all very powerful. [However] it's useless if they aren't observing me, taking notes and debriefing, and asking questions and talking about what they saw"; "Getting the reading coaches into the classrooms, working with the teachers, co-planning, co-delivering lessons, having conversations after they have taught the lesson, getting away from the model of just doing a walkthrough and then giving feedback. Helping the reading coaches focus more on just exactly what it is they want to see happen at the school. I think those teachers did grow and change on the way they organized their classrooms and the way they delivered instruction."

Another Coordinator explained in more detail: "Being able to get into classrooms and model instructional practices was the most effective way of bringing about change, not just talking to teachers. I did direct modeling at Gibbs High School, Northeast High School, Lakewood High School. Those are the three that I worked on. I know that instructional practices changed in Gibbs. I worked with a teacher for a full quarter and she let me run the model for a full quarter. She eventually began to adapt those practices and using them other classes. It gave me actual evidence that she was seeing the value and taking those

strategies to her other classes. Our goal next year would have been for each coach to adopt a teacher for a quarter and then continue modeling in another classroom."

Some of the Coordinators expressed the importance of modeling in the classroom as a means to increase the time that reading coaches spend in classrooms. As one Coordinator explained: "The Coordinator and coach have to be in the classroom. If the coordinator does not model what the coach needs to do in the class then many times they don't get into the class." In some cases, Coordinators helped coaches build rapport with teachers and gain coaching skills needed to go into reading classrooms and model new instructional practices. One reading coach described: "She made me a lot braver about modeling lessons. Because I was nervous, she helped remove that, we talked about where it could go and how I could handle it."

Looking forward to next year, in which many schools may not have reading coaches in place, one Coordinator suggested: "We hope some of these districts will keep their coaches. This will change, because next year I will have to bring some teachers in to observe a model teacher."

Classroom observations of intensive reading classes showed large variations in alignment between teachers' practice and use of SBRR. While some of the teachers did not show usage of research-proven practices (e.g., utilized most of class time for Round Robin Reading, silent reading, or the traditional lecture format), other teachers incorporated a variety of strategies recommended by the research including literature circles, repeated reading, and a variety of graphical organizers. In some cases, teachers told the class that they will use certain strategies, such as think aloud, but did not implement these strategies with fidelity. Conversations with reading coaches confirmed that in many cases, teachers are struggling with implementing instructional approaches such as differentiated instruction and cooperative learning but are lacking concrete understanding of how these approaches should look like in the classroom. There was a consensus among coaches that modeling in the classrooms has been one of the most helpful PD activities in the school and that additional modeling is needed to ensure that reading teachers implement effective strategies with fidelity.

Finally, classrooms visits by FLaRE Coordinators may help align PD both with the reading level of students and with their level of engagement. We have found that about one third (35%) of the randomly selected students in the site visits sample were disengagement, and about 15% of the students were disruptive. In some of the classrooms, teachers spent a considerable part of instructional time on managing students' behavior (e.g., repeating information because of disruptive behaviors, providing incentives and rewards for participation). In classrooms in which teachers were able to connect the topic of the lesson to interesting materials, provided frequent opportunities to respond, and integrated a number of clear and interesting activities into the lesson had minimal levels of disruption or no student disruption during the reading class.

B. Targeted PD

Consistent PD Topics of Focus

Consistency in PD focus was also noted as an important way to bring about change. Consistency in this context is defined as the ability to select a theme for PD and through a series of meetings with the coach and teachers work on this theme using a variety of activity (e.g., workshops, modeling, debriefing, follow-up observations of teachers in the classroom). One Coordinator said: "I can say what I have found most effective this year is a consistent model of PD. I would go in weekly and we would do PD and then we would go into the classroom on the next visit with our PD topic and work with the children. So let's say on a Tuesday the teachers and I worked on performance task items; the next time I go back we go into the classroom and do those performance task items with the students, so that the teachers can see it in action. So I'm there the entire day, we may start out in the morning and I'm doing it, mid-morning—we are doing it together, then in the afternoon the teachers are doing it on their own. The coaches and I would

do this throughout the reading department with the teachers. I was able to do this at two schools. Both schools grades went up from F to C. Reading scores went up at least 15%. I feel really good about that."

Individualized Attention

One Coordinator suggested that providing mini-workshops to teams of teachers was more effective than school wide in-services as they allow the Coordinator to make the presentation more informative and relevant to the attending teachers. The Coordinator explained: "PD in small learning communities as opposed to a whole school-wide professional development. I think tailoring the PD to the needs specifically to a certain department is more effective for their needs, and then going into the classroom and following up. When you do things in a small learning community it's a good way to open it up and get small groups of people talking about what works in their classrooms." Reading coaches shared the same feeling. One explained:

"When there are county trainings it's too big. But the FLaRE Coordinator has helped us build trust between our two schools [during coaching cadre] and we can really learn a lot and ask more individualized questions regarding our students."

Support in Data Use

Finally, several Coordinators indicated working with schools on using data to identify needs and plan instruction. Coaches and teachers gained better skills in interpreting data, and generally became more comfortable using a variety of data. One Coordinator stated in an interview: "What has been successful has been the process of looking at the assessments with the coaches and the teachers to help them see what help their students need and then determining how to do it. So being co-learners with the teacher and going in and modeling it and co teaching and doing special PD."

Support in Determining PD Content

Tailoring the PD to the schools' needs was a characteristic of the FLaRE PD that all Coordinators noted as an important part of their work. In schools in which they were able to have close communication and collaboration with the reading coach and the reading leadership team, Coordinators and coaches delivered surveys to gauge teacher professional development interests. An example of teachers' interests that were revealed through the surveys is building a respectful classroom climate and increasing students' engagement in reading classes.

It should be noted that Coordinators were conflicted about the extent to which they should steer schools' instructional change versus facilitating the schools' decision making processes to come to a realization of their own about their needs. A shared philosophy followed by most of the Coordinators advocated helping schools to identify problems in instructional leadership, planning and practice rather than dictating the types of changes needed. One Coordinator said: "It took a year for her [the former Coordinator] to get the reading leadership team to realize what was wrong. She knew, but she had to get them to realize, rather than telling them what was wrong. They didn't invest the time last year in receiving professional development themselves, but they came to the realization on their own that they didn't know enough about the subject, as they hadn't received any professional development on what being a reading leadership team meant."

Another Coordinator shared the same strategy of avoiding prescribing specific directions for instructional change: "we don't come up there with a pre-set agenda saying you need to work on vocabulary, you need to work on guided reading…. We go in there and sort of gather information. I don't find that it works to go in like a bulldozer and say they don't know what they are doing. You know, nobody does it like that. I find it much more effective to try and guide them subtly rather than being real blatant and telling them they really have trouble in this or that area. It seems to work that way with reading coaches. If I can find a way to get in the door, and get them working with me, then we can, over time, steer them into other areas

in ways that are really going to make more difference and really are more related to the Scientifically Based Practices."

Reading coaches also felt that this approach made the PD more relevant and effective. One coach explained: **"**I think the biggest help has been, when they have meetings for us, at the beginning they ask us what our needs are and they're very good about addressing the needs of the group. It's not just about what they think our needs are."

One Coordinator described an approach of getting school staff to reflect on their practices but at the same time, to enable immediate change, providing clear guidance about effective and ineffective practices. She said: "I try to get people thinking—and here are some things that you might try, and let's see how it works in your classroom, and what do you think about it—and try to get them to own it. A lot of times teachers want to do things differently, but they don't know how. They don't know that they might be doing something that might be bad practice. For example, this one teacher on the Literacy Leadership team—we were talking about round robin reading, also known as popcorn reading, and she didn't know what it was and then she realized that she was doing it and that she didn't know that it was a bad practice. Now that she knows better, she should try new things."

Classroom observations in four sites confirmed the need to support the school identification of PD needs. In those classroom observations, two observers visited each of the intensive reading classrooms. The observers randomly selected five students in each class and observed their behavior in the context of the lesson taught and behavior of other students in the classroom. Observations were followed by brief discussions with teachers about the strengths and weaknesses of the students observed, instructional strategies that the teachers thought may help the students observed, and PD needs. Three main themes for needs of support were identified:

- Helping teachers conduct formative assessments to identify types of reading comprehension problems. Teachers were successful in identifying level of basic skills such as phonemic awareness and fluency. They were less able to point out the reasons for low reading comprehension skills (e.g., explicit comprehension difficulties due to vocabulary deficiencies, problems in making inferences), and form a plan of differentiating instruction to address these deficiencies.

- Helping teachers utilize data about struggling readers to identify appropriate strategies and the best conditions for implementation. Teachers and coaches have noted multiple needs including developing awareness for utilizing data to inform instruction, support in learning how to generate reports, read reports, and triangulate data to better understand literacy challenges of struggling students.

- Student disengagement was a frequent problem noted both by reading coaches and in classroom observations (34% of the students observed were disengaged). However, most teachers and coaches expressed low confidence in their ability to address this challenge. Classroom observations revealed that student engagement was related to the instructional practices in the classroom. When the teacher varied the instructional practices used in one class hour (e.g., alternated between whole-class discussion and small group work) and clearly modeled the process (e.g., distributed index cards to guide the use of a graphic organizer) students seemed more engaged. Therefore, we believe that both direct support through PD content that addresses student motivation and support in identifying PD content that addresses research-based classroom instructional practices may improve student engagement.

Targeted Support in the Areas of Vocabulary, Reading Comprehension, and Student Engagement
We conducted two separate interviews with Coordinators about the challenges, best practices, and FLaRE support to Level 1 schools included in the comparison by FLaRE level in this study. Coordinators reported close support (e.g., workshops, modeling, providing tools and relevant professional literature) for explicit vocabulary instruction to about one third of the schools; in most cases, little support was provided for targeting the specific vocabulary acquisition challenges of English language learners and students with disabilities. The most frequently cited strategies that Coordinators facilitated were building a print-rich environment (e.g., expanding classroom libraries, using word walls), teaching analysis of word parts, and teaching content area vocabulary. Generally, the strategies recommended by Coordinators align with recent recommendations of experts in adolescent literacy (e.g., Kamil et al., 2008).

Coordinators reported providing professional development related to explicit reading comprehension instruction to less than one third of the schools. Coordinators reported mixed approaches with respect to providing tools and information about explicit reading comprehension instruction. In some cases, Coordinators refrained from providing tools because the school had structured reading programs in place that already specified the instructional approaches and tools. As one Coordinator notes: "I see my role as a support person. I go in and work with the teachers. I do not provide any additional tools. I do *very* little modeling and the reason is that I'm not a READ180 teacher, nor a Fast ForWord teacher nor a Strive teacher. The only thing I can model, which I have for one of the schools, I'm doing literature circles, kind of co-teaching really, you know, laying out the guidelines." Coordinators tended to supplement the existing reading programs mandated by the school district with professional development about meta-cognitive awareness of reading comprehension and discussions around text (e.g., literature circles). Other strategies, such as using graphic organizers, questioning, and summarizing, were also facilitated, although the Coordinators noted in some of the cases that the coach already had strong knowledge of those strategies.

There was general agreement among Coordinators that student engagement and motivation is a salient problem in many of the schools. Coordinators reported providing some professional development support to increase student engagement to about one third of the schools included in the sample. The most frequent strategies advocated by Coordinators were providing opportunities for student choice (e.g., choice of books and texts), providing books on topics relevant to students' lives, and explaining to students the purpose and rationale of the various reading assignments they receive. In a few cases, Coordinators mentioned the use of media to spark students' interest. There was no mention of providing guidelines for teacher feedback as a way to increase students' motivation. It should be noted that several Coordinators worked with the reading coach or the school administrators to increase teacher motivation, especially the motivation of first-time teachers, who had become discouraged by the large number of challenges faced by their schools.

C. General PD

FLaRE Coordinators provided PD to schools to help reading teachers obtain their reading endorsement. This support included competencies 1, 3, 4, 5, and 6, while teachers could pursue competency 2 through the Florida online reading professional development (FOR-PD). In addition, secondary schools content area teachers may participate in content area reading professional development (CAR-PD), which would make them eligible to serve as a reading intervention teacher in their content area class pursuant to the approved K–12 Comprehensive Reading Plan. One reading coach noted: "The Coordinator and I taught 6 classes in reading endorsement through competency 6. They had to talk about their teaching and we could see all the different pieces they put together. They know they are able to do these things and now they also know where it all fits using the whole big picture."

All reading coaches interviewed brought up CAR-PD as an example of a type of FLaRE support they were satisfied with. One reading coach noted: "Our purpose is to incorporate reading in all [content]

areas. We are going to have a stronger literacy effort than we have in the past. We have five people trained in CAR PD and several people taking the competency 2 this summer so we can do the CAR PD training with the faculty this upcoming year."

Another coach commented on the dramatic change that CAR-PD made: "she trained me to be a CAR-PD facilitator. Doing that, doing CAR-PD training at our school has really impacted those 6 teachers I trained. It's like night and day. They had made it a practice to not make their students read. You know, they'd say, I know they're not going to read the social studies book, so I'm not going to make them read it, so I'll just put everything on an overhead on the projector. And I'd say, no, you can jigsaw, or do something else. They're so proud of some of the things that they're doing now."

Taking Context Into Account

In Chapter 3 we noted the large variations in intensity of FLaRE services among FLaRE Level 1 schools. A focus group conducted in March 2008 confirmed that not all Level 1 schools received the comprehensive PD plan they signed up for. The focus group participants provided information about their experiences of approaching schools for support and offered explanations for the differences among schools. Further information was collected in follow-up phone interviews with Coordinators and reading coaches. In addition, to understand schools' professional development needs, we conducted two site visits in March 2008 and four site visits in October through November 2008. These site visits included observations of intensive reading classrooms and interviews with the teachers of the intensive reading classes and the reading coaches.

Consistency and Coherence

Schools that already had in place good collaboration among staff and a sense of coherence among literacy programs and initiatives were more likely to benefit from FLaRE PD. Here is an example provided by a FLaRE coordinator: "They have had consistently strong coaches from the same coach for more than two years. They have a common language and a common goal and those people are both actively pursuing more training so I would say they are very strong in understanding the differences in improving student reading and improving student test scores."

In a survey we administered during one of the phone interviews with Coordinators, they rated the majority of the schools (62%) as having a lack of coherence between the various sources of support that teachers receive to promote literacy instruction in the classroom. In some cases, the Coordinators described lack of communication between the school and the district or among staff members within the school as the main reason for lack of coherence rather than conflicting philosophies or professional approaches.

For example, one reading coach noted "I know that the coordinators have to be stretched for different schools and that just makes it difficult because our Coordinator has a tight schedule so we have to work around her schedule. We would probably just like to see her more. It would be nice to see FLaRE work with the CNET team a little with their reading coaches so that maybe the CNET team could almost be like an extension of the FLaRE coordinator because they're here more often." [The CNET (Collaborative Network) provides financing and support to low-performing schools at the coach's district through a collaboration among Title 1 staff, Research & Evaluation Department, ESOL Department and Exceptional Student Education Department.]

Receptiveness

All Coordinators noted that schools vary in their level of receptiveness to FLaRE support. Four main reasons for lack of school receptiveness were indicated by both Coordinators and coaches:

Staff Turnover. A new school principal or a new reading coach needed adjustment time to gain a better understanding of the school's needs. During this adjustment time the communication with the FLaRE coordinator was limited.

Lack of Knowledge About FLaRE. Several schools began with a low level of expectations. The principal and the coach did not know what to expect from the FLaRE Coordinator or how much the Coordinator could help them improve literacy instruction in the school. One reading coach said: "I really didn't realize how much support you could get from FLaRE. All of the books, and the resources, and not just for me. I would have a teacher who would need something and boom, she [the Coordinator] would have something. My expectations were not as high as the level of service that she's provided."

In many schools only the coaches understood the support role of Coordinators; teachers were not aware of the Coordinators' support. A reading coach in one Level 1 school described how initially Coordinators could not visit classrooms due to the fear that teachers will feel they are being evaluated and show resistance to the process. The coach explained: "Because the school was a consistently failing school, there were people from state in here all the time. People would walk into the classrooms and ask teachers for a copy of their lesson plans on the spot, in the middle of their lectures. So the environment here was one in which you didn't want to just go ahead and put somebody into a classroom. Teachers didn't view it as support, they viewed it as somebody evaluating them and judging them. So when we had FLaRE, we knew we needed them for support but we didn't want to have them go and jump right into the classrooms and recycle the same negative attitudes. So it's really *through us* [the coaches] that FLaRE has supported the teachers."

Reading Coaches' Resistance to Outside Help. Several Coordinators noted that in some Level 1 schools, they had difficulty scheduling meetings with coaches. Meetings were often cancelled or re-scheduled. As one Coordinator described: "The senior coach in particular, is thinking—'I have a doctorate, I have all these years of experience, I should not need someone's help.' It has to do with how they view the support." Another Coordinator commented: "I know that there are some coordinators who are unable to work with the reading coach, so they just go in there and teach students. That is what I was doing at one school, thinking that I could build that trust and that capacity. I went in there and just worked with the teacher and then when nothing was moving past there, I sat down again with the Principal and the reading coach and the assistant principal and said: "Look, this isn't really Level 1. In order for me to be able to do my job, we need to do … But there are coordinators that seem to spend a lot of time doing that kind of stuff as a way to kind of get in. You are kind of a substitute teacher."

Low Level of Staff Commitment to Change. Several coordinators noted that teachers and coaches were not ready to dedicate the time and effort needed to implement the change process. In some cases it was because they were already over-burdened by multiple literacy initiatives; in other cases there was a lack of staff buy-in. As one Coordinator noted: "Even at my favorite sites, there has been such negativity about what we were doing, I think that is the challenge: we go in and everyone feels a sense of urgency and is looking for a quick fix and sometimes when they look to me, they want change now but don't always want to work for it." Another Coordinator provided an example: "There was a school that I was talking to about changing their level of service because it seemed like they weren't able to devote enough time to what we agreed on with a level 1. One of those 2 dropped to a level 2 and the other stayed at 1, but they still didn't do much."

Functional Reading Leadership Teams

The Reading Leadership Team can be a vital part of a school's literacy initiative. The function of the Reading Leadership Team is to build capacity and create reading knowledge within the school. Additionally, it promotes collaboration among teachers and encourages action research and knowledge building. In schools that do not have an existing RLT, Coordinators have helped the school understand

the model of a functional RLT. This type of support enhanced the school capacity, but came instead of other professional development activities that might have been more closely associated with instructional practices in the classroom. In addition, in several schools, Coordinators noted that the RLT exists on paper, but in reality, meets infrequently, or uses meetings inefficiently to promote literacy goals. As one Coordinator noted: "The most common problem is that the RLT really doesn't exist. It does on paper, but when you get into the schools, it doesn't exist. They start out really strong, But then it fizzles out by January. The RLT doesn't really exist. There are very few schools that have a team that runs the way it should, but the majority don't."

Leadership

"I do personally believe it has to do with the reading leadership team, if it is willing to carry the message to the different content areas and other teachers, then the PD will get big. If they are no supportive or encouraging many teachers feel they don't have time or don't have to go to the PD. We keep going taking baby steps. Some principals strongly encourage and recommend that teachers attend and that is where the PD occurs more and is implemented but most principals do not because they do not want the trouble of union issues."

"We can agree on the level of service but the administration's buy-in is very important. Sometimes they stay at Level 1 because they don't want it to be seen that they rejected help, but help on paper and buy-in in action are different things. Some of the real low F schools have so much thrown at them that they can't really get into any initiative for change. Having the administration not present at RLT meetings is a common problem. We can make all of the decisions in the world at the meetings, and we can plan PD, but we have to have the administration there to help us with how we can do things."

Trust

Relational trust among the principal and teachers, teachers and the coach, and among coaches and specialists fosters a set of organizational conditions, some structural and others social-psychological, that make it easier for school staff to change existing practices and improve student learning. Several Coordinators noted a lack of trust on one of those levels that led to low confidence of teachers in their own ability to implement new practices, limited communication, and overall resistance to change. Consequently, several Coordinators spent a part of their time facilitating the infrastructure needed for literacy improvement in the school. The work of the Coordinators to help the school set up a Reading Leadership Team also improved teacher collaboration in planning together, coordinating, and exchanging ideas for literacy instruction.

"They don't look at me as an authority role, but they look at me as an expert on reading. It opens the door for the coach to get into the classroom."

Perceived Teacher Qualifications and Knowledge

We asked Coordinators to rate sample schools on the level of teacher qualifications and knowledge on a five-point Likert scale ranging from 1 (limited) to 5 (very strong). Only 22% of the schools received a rating of strong (4) or very strong (5) for teachers' knowledge about adolescent literacy practices. One reason is the high turnover that characterizes low-performing schools. One Coordinator explained: "I don't know of any teachers that have their reading endorsement. There was a lot of turnover. There are two that are pursuing endorsement, but they haven't completed it. I know that they don't have the training under their belt. From what I saw of their classroom practices, I could see that there is some level of understanding of good practices, but it is fragmented."

Some Coordinators perceived the level of teacher knowledge as relevant to their ability to impact the capacity of the school. As one Coordinator said: "I could tell you one thing that I think FLaRE people really have to watch out for.…working with the neediest teachers and now all these teachers are gone;

they are not being re-hired. So, you know, what good was the work they did last year? I mean it was good for that teacher, those students, but it was not very poignant. It didn't build synergy at the school and it is not something that would continue to get better. Whereas if you are working with a teacher that kind of has a handle on things but needs to go a bit deeper in her thinking, then you can really make a bigger difference."

Chapter 5: Conclusions

This chapter summarizes the results of this study and offers recommendations for further actions to build capacity in schools. The study results showed that FLaRE Level 1 high schools did not advance in a higher rate than their counterparts in the comparison group with regard to FCAT reading test scores. Yet, it is possible that comparison schools had in place staffing capacity and alternative sources of PD support that may account for the lack of effect. We have found a statistically significant correlation between several types of FLaRE PD activities and student achievement; However, this relationship was observed only for small high schools and those schools with a relatively lower number of students eligible for free/reduced-price lunch; these schools may have less complex needs and may be quicker to change following FLaRE support. The most efficient type of PD activity was classroom presence (for example, modeling and co-teaching activities). The second most efficient activity type was targeted PD (for example, designing and providing a mini-workshop tailored to the school needs). The third most efficient type of PD activity was general PD (for example, providing support for reading endorsement of teachers). Additional qualitative data suggests that coaches gained more confidence in using data for decision making and in modeling classrooms for teachers following FLaRE support; additionally, some teachers changed instructional practices in the classroom both in reading and content area classes. Finally, in some of the sample schools, increased motivation of students to read was noted by reading coaches.

The FLaRE model resembles the school reform model in its dependence on ongoing follow-up and technical support and in its cumulative impact over time as the school gains the capacity to sustain instructional improvement (see for example Kidron & Darwin 2007 for a review of the research and characteristics of reform programs for secondary schools). Therefore, additional research is needed to assess long-term effects after three or four years of FLaRE PD.

The FLaRE model relies heavily on the reading coach as the central agent of change within the school. The reading coach fulfills several responsibilities in facilitating the PD support. First, the coach is typically the person who keeps close communication with the Coordinator, and who schedules the times of visits of the Coordinator to the school. Second, the coach meets with the Coordinator, to strengthen coaching skills, review the school literacy plan of action, and to coordinate meetings between the Coordinator and the school administrators, teachers, and reading leadership team. However, the emphasis on reading coaches as the main recipients of the PD represents a major vulnerability of the existing FLaRE model. Advances in practice can be lost when the reading coach is replaced or the position is terminated, especially if teacher turnover is a problem in the school. When coaches leave, their knowledge of best practice goes with them and the supportive bonds they may have developed with teachers end. In addition, a recent study by RAND suggests that reading coaches may not have sufficient time to ensure efficient transfer and use of the knowledge obtained from the FLaRE Coordinator (Marsh et al., 2008). Finally, the model assumes that the coach has already built the trust and collaboration with teachers to enable delivery of the knowledge gained from FLaRE support. When this assumption is not met, the impact of the PD may be delayed due to the need to establish rapport.

These types of challenges may be prevented by the identification of skilled and committed teachers and teacher mentors who are likely to stay in the school. Including them as key recipients of FLaRE PD and as members of school reading leadership teams can serve many purposes. First, doing so extends the cadre of site-based professionals who understand the needs of struggling adolescent readers. Second, these teacher leaders can provide bridges between coaches and intensive reading teachers to hasten the building of trust and rapport. And finally, these teacher leaders can provide continuity in maintaining a focus on adolescent literacy if coaches and teachers leave the school.

Interviews with 14 teachers of intensive reading classes and classroom observations revealed that student engagement is a major obstacle to reading instruction. In order for teachers to implement research-based

practices with fidelity, they need tools to manage the classroom effectively and motivate students to become more engaged (Kamil et al., 2008). Several Coordinators and coaches have noted that Coordinators worked with school staff to help increase students' engagement, however, there is a strong need to provide further support and greater access to strategies that teachers can use in their classrooms. Additionally, two Coordinators have described working with reading coaches to increase teachers' motivation and engagement. The literacy challenges of low-performing, ethnically diverse schools often demotivate teachers, especially new teachers (National Comprehensive Center for Teacher Quality & Public Agenda, 2008). FLaRE as a model that emphasizes capacity building should be broadened to define more explicitly how Coordinators can help schools empower reading teachers, and motivate them to pursue instructional innovations to improve student reading skills.

Tying Professional Development Activities to School Readiness

The lack of visible improvements in FCAT reading scores may be discouraging to educators who view FLaRE and provision of intensive reading interventions as a way to strengthen students' reading skills (and subsequently their academic performance in general). Resistance to change in instructional habits is natural (Poynton, Schumacher, Wilczenski, 2008; van den Berg & Ros, 1999). In low-performing schools, such as the ones served by FLaRE Coordinators, multiple sources of support to bring about change and transform the school are common. As interviews with reading coaches and Coordinators indicated, in some schools, teachers and coaches were overwhelmed by the multiple sources of support and uncertain about and sometimes possibly resistant to replacing current strategies with new ones. Teachers' receptiveness to new knowledge and instructional methods is affected by the impact that they believe the new practices can make (Guskey, 2002). The findings of this study suggest that schools, in which teachers and administrators were motivated and open to change and worked collaboratively towards change, have experienced observable improvement in student reading achievement.

As suggested by a study of the implementation of the Alabama Reading Initiative in secondary schools (Salinger & Bacevich, 2004), the establishment of a cohesive approach and perspective about helping struggling adolescent readers, along with collaboration and motivation to effect change are a necessary prerequisite to real improvement for these students. Findings from this study suggest that to enable continued motivation of teachers to strive towards change and improvement in reading instruction, Coordinators and coaches should help teachers self-monitor their instruction and student outcomes using multiple indicators of student success (for example, using results from mini-assessments, monitoring number of books read, surveying students, etc.). The RAND study of professional development in Florida middle schools has found that coaches' discussions with teachers about data were the strongest predictor of improved reading scores (Marsh et al, 2008).

Looking across all the data we have collected about FLaRE implementation and drawing upon our understanding of school reform (Kidron & Darwin, 2007) and of adolescent literacy (Kamil et al, 2008), we further suggest that schools themselves are an important variable in the success of FLaRE and achievement of its goals. One way to see the FLaRE model is as a type of school reform, which strives to produce a schoolwide improvement in the area of literacy. An increasingly popular practice in the area of school reform is to evaluate school readiness for the change.

Based on the analysis of facilitating and inhibiting factors, we can recommend an assessment of the potential effectiveness as part of determining the appropriate service plan. Existing criteria for schools' eligibility for services include a school grade of D or F, or less than 40% of the students performing at grade level. To maximize the efficiency of Coordinators' time allocation among schools, additional factors should be taken into account. Some or all of the 11 facilitating factors below may be taken into account in determining the PD plan.

Checklist for Determining a Good Candidate for FLaRE PD

- ❒ Small high school
- ❒ Less than half of the students eligible for free/reduced-price lunch
- ❒ Good teacher collaboration already in place
- ❒ Sense of coherence among existing literacy programs
- ❒ Teaches do not feel over-burdened by existing PD
- ❒ The principal and coach feel well adjusted in their positions
- ❒ The principal and coach are knowledgeable about FLaRE
- ❒ Staff are receptive to FLaRE PD; they recognize the need and feel ready to try new strategies
- ❒ Guaranteed access to all classrooms, not just to those of strongest or neediest teachers
- ❒ Trust between teachers, coach, and school leadership
- ❒ The principal actively supports the reading leadership team

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Appendix A: Protocols for FLaRE Area Coordinators

Coordinator:_____ Interviewer:_____

AREA COORDINATOR FEBRUARY PROTOCOL[4]

1. **Please tell me a little about yourself.**

   [Probes: How long have you been with FLaRE? What is your educational background? Did you have prior experience or training working with low-performing schools or students? What types of literacy expertise and training in teaching reading and writing did you bring with you?]

---

2. **Please tell me about the history of FLaRE services to the following schools**: **a) Emerald bay Academy, (b) Hanley Technical High School, (c) Cottondale high school.**

   [Probes: Is FLaRE the main source of professional development support in reading in those schools? Does the school have a literacy leadership team? If yes, when was this team first created and who is involved in this team? [school name] has selected a level 3 service plan this year; did this school receive a similar level of service last year? [school name] has selected a level 2 service plan this year; did this school receive a similar level of service last year? [school name] has selected a level 1 service plan this year; did this school receive a similar level of service last year? For all three schools, can you tell me about the decision to keep or change the service level (for example, what may have affected this decision)?

---

3. **What reading programs, practices, or policies were introduced during the last two years in the following schools to improve student reading achievement? (a) [school name] high school, (b) [school name] High School, (c) [school name] high school? When? Why were these selected? If multiple strategies are in use, what were early actions? What came later?**

   [Probes: On what basis were these selected? To what extent did the research base influence the selection of strategies? To what extent did school-based data influence the selection?]

---

4. **How does school staff in the following schools react to your suggestions and support? (a) [school name], (b) [school name] High School, (c) [school name] high school? To what extent did they request / initiate these services?**

   [Probes: Was the school principal involved in requesting services and support? How? Did the reading coach and content area teachers support or resist your suggestions? How? Where there any obstacles to full implementation of FLaRE in these schools?

---

[4] The number of schools indicated in this protocol varied by Coordinator. Only schools included in Study I were included in the protocols. In February, matched Level 2 schools were included in the protocols to examine feasibility of a design that includes Level 2 schools.

5. **What other sources of support besides FLaRE did the district provide to the following schools to encourage changes in student reading achievement? (a) [school name], (b) [school name] High School, (c) [school name] high school? Do these differ from or conflict with FLaRE supports? If so, how are these resources coordinated?**

   [Probes: Sources of support such as in-service training and workshops, tools and printed guidance materials, technical assistance by phone or email, school visits for coaching and classroom observations?]

6. **Describe the formative and summative assessment system for student reading achievement in the following schools: (a) [school name] high school, (b) [school name] High School, (c) [school name] high school. Do you use data from these assessments? How?**

   [Probes: How/where did you learn to use these data? Do you provide any guidance to the reading coach for using this data? How does it affect the professional development provided to teachers?]

7. **Is there anything else I should know about the challenges and FLaRE efforts in these schools: (a) [school name], (b) [school name], (c) [school name]?**

AREA COORDINATOR MARCH PROTOCOL[5]

1. **What activities have you conducted this year to help promote students vocabulary in the following schools: (a) [school name], (b) [school name], (c) [school name]?**

[Probes: Why did you recommend those specific instructional strategies? Which of those strategies did you model to teachers? Which strategies have you co-taught with teachers? Do you have any sample materials to share about the vocabulary strategies you have been teaching?]

---

2. **Have you recommended specific vocabulary strategies for sub-groups of students (e.g., English Language Learners, Students with Learning Disabilities) to the following schools: a) [school name], (b) [school name], (c) [school name]?**

[Probes: Why did you recommend those specific instructional strategies? Which of those strategies did you model to teachers? Which strategies have you co-taught with teachers? Do you have any sample materials to share about the vocabulary strategies you have been teaching?]

---

3. **What vocabulary instructional practices do you see as the most effective in promoting vocabulary of high school students?**

[Probes: Which practices would you recommend to ELA teachers? Which ones would you recommend to content teachers (e.g., science, history, social studies)? Do you have any anecdotes to share of success stories in the following schools: a) [school name], (b) [school name]?

---

4. **In the past, have you provided professional development around student engagement or motivation to read to the following schools: (a) [school name], (b) [school name], (c) [school name]**

[Probes: In your opinion, what are the most effective strategies to increase high school students' engagement? Why do you think these strategies are effective? Last time we talked you indicated working with Osceola district assistant superintendent around issues of student engagement. Can you tell me more about it?]

---

[5] Starting in March, clarification questions about information in Coordinators' logs were included in addition to these core questions.

AREA COORDINATOR APRIL PROTOCOL

1. **I would like to focus this phone call to talk about reading comprehension. Where do you see the strength and were do you see the challenges in promoting reading comprehension skills in (a) [school name], (b) [school name], (c) [school name]?**

2. **Were you ever been requested to provide any professional development or other support related to understanding main ideas, plot and purpose in (a) [school name], (b) [school name], (c) [school name]?**

3. **What do teachers in (a) [school name], (b) [school name], (c) [school name] do to help students become active readers?**

4. **To what extent do teaches or coaches emphasize use of multiple strategies for reading comprehension in (a) [school name], (b) [school name], (c) [school name] (e.g., both making predictions, and making connections to prior knowledge and summarizing)?**

5. **You have been part of the process of FCAT preparation and testing in (a) [school name], (b) [school name], (c) [school name]. What can you say about the students' readiness in terms of reading comprehension skills? What progress has been achieved so far? What issues remain to work on?**

6. **What do you see as the greatest challenges in (a) [school name], (b) [school name], (c) [school name] that can be supported by FLaRE services?**

AREA COORDINATOR MAY PROTOCOL

1. **Please rate (a) [school name], (b) [school name], (c) [school name] on a scale from 1 to 5 with respect to reading teachers understanding of the content and implementation of adolescent literacy instructional strategies. (teachers' knowledge).**

[school name]

1 = Limited	2 = Moderate	3 = Moderately strong	4 = Strong	5 = Very strong

[probe: please explain your rating]

---

2. **Please (a) [school name], (b) [school name], (c) [school name] on a scale from 1 to 5 with respect to lack of coherence between different sources of support that reading teachers receive (e.g., district resources, principal's initiatives, FLaRE, other sources of support)**

[school name]

1 = Limited	2 = Moderate	3 = Moderately strong	4 = Strong	5 = Very strong

[probe: please explain your rating]

---

3. **Please rate (a) [school name], (b) [school name], (c) [school name] with respect to the impact of FLaRE on the reading coach's practices in the school**

[school name]

1 = Limited	2 = Moderate	3 = Moderately strong	4 = Strong	5 = Very strong

[probe: please explain your rating]

---

4. **How do you see the direct or indirect impact of FLaRE on teachers' knowledge and practices in (a) [school name], (b) [school name], (c) [school name]**

[school name]

1 = Limited	**2 = Moderate**	**3 = Moderately strong**	**4 = Strong**	**5 = Very strong**

[probe: please explain your rating]

---

5. **How do you see the direct or indirect impact of FLaRE on use of scientifically-based (research proven) reading practices in the classroom in (a) [school name], (b) [school name], (c) [school name]?**

[school name]

1 = Limited	**2 = Moderate**	**3 = Moderately strong**	**4 = Strong**	**5 = Very strong**

[probe: please explain your rating]

---

6. **Based on your knowledge of various FLaRE schools you have coordinated, what are the characteristics of FLaRE activities you deliver in the school that seem to be most effective in promoting students' achievement? In which schools this school year (2007–08) were you able to implement these activities?**

   [Probes: Examples to potentially activities may include: modeling a classroom, observing a classroom and debriefing, helping the coach build capacity in the school, working with students, facilitating positive and collaborative relationships between the reading coach and teachers]

AREA COORDINATOR JUNE PROTOCOL

1. **To our understanding, in the past (2004, 2005), FLaRE services focused on the district level, providing Reading Endorsement professional development to build capacity through creation of a cadre of local Reading Endorsement facilitators in each district. Last year (2006–07), the focus shifted to school level support. Have you still maintained some level of support on the district level? What percentage of you time is usually spent on providing district-level support?**

---

2. **When you completed the revised version of the monthly logs this year, how did you fill the columns under category 4 (Facilitate a year-long (twice-a-month) structured course of professional development for cadres of literacy coaches with a detailed syllabus to be developed according to strengths and needs of group.)? Did it make sense to complete it on the school level?**

---

3. **I would like to go over the Level 1 and Level 3 schools assigned to you, and quickly check how their coaches take advantage of the professional development for cadres of reading coaches.**

   [Probes: Have this school's coach attend professional development this year? Did the coach engage in any follow-up activities to develop knowledge?]

---

4. **This is our last interview. I would like to thank you for your time and willingness to share with us your knowledge of the schools you have supported this year. Are there any questions you have for me about this evaluation?**

Appendix B: Protocol for Reading Coach Phone Interview

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EVALUATION OF FLaRE
Protocol for a phone call with a reading coach

Name of reading coach: _____
Name of school: _____
Date and time of phone call: _____

Good morning / afternoon. Thank you for taking the time to talk with me. I am a researcher from the American Institutes for Research (AIR). AIR have been contracted by Just Read, Florida! and the university of Central Florida to evaluate the effectiveness of FLaRE professional development provided to your school so that Just Read, Florida! can make those services more useful.

The information you provide us today will remain confidential and will be used to understand any observable trends in FCAT data. Do you mind if I record this conversation?

A. Background

1. Number of Level I & II students this year? (how many are Level I? How many are Level II?)

2. Level I & II Programs (e.g., READ180)? (Have you encountered any finance limitations or implementation problems this year?)

3. How long have you been the reading coach of the school? Are you the only reading coach?

4. What is your greatest area of concern with respect to students' reading skills in this school?

5. Does the school have a Reading Leadership Team? Who is included in this team? In what way is the principal involved?

6. In what way does the RLT impact reading instruction in the classroom?
   Does the RLT receive support from the FLaRE coordinator?

B. Instructional practices

7. What reading curriculum is implemented in your school: (e.g.READ180). How would you characterize the level of implementation (pick one):

❒ needs improvement
❒ satisfactory
❒ excellent

8. Please provide examples of specific strategies teachers are using to promote:

(a) Reading comprehension (or passage comprehension)

(b) Vocabulary

(c) Students' motivation and engagement

C. Needs addressed by FLaRE

9. Your school has received FLaRE services since 2006-7. Is that correct?

10. How would you characterize the intensity of services provided to your school last year (low, moderate, high)? What types professional development services were provided (in-service, assessment support, co-teaching, etc.)?

11. What were your expectations from Level 1 FLaRE service plan? What school needs were you seeking to address (ELA related needs? Reading as part of specific content areas? Needs of student sub-groups?)

12. Are you satisfied with the professional development provided by FLaRE this year? If yes, can you please share some anecdotes of what was particularly successful? If you are not satisfied with the services, please describe areas for improvement.

13. Have you noticed any changes in teachers' instructional practices since participation in FLaRE first begun?

14. Have you noticed any changes in students' reading performance (in class or in assessments)? Struggling readers' performance? Can you please provide some examples from this year?

Appendix C: Site Visitor Protocol

Preparation Checklist

(a) The date is agreed upon by the school principal, reading coach, and Area Coordinator

(b) Two days per school to reach all or most of the intensive reading classes

(c) Lesson plan or lesson purpose obtained in advanced for each observed classroom.

(d) Informed consent forms distributed one week in advance.

(e) Reading coach knows that the observers will ask teachers a few questions about their lessons as well as recent progress of the observed students. The reading coaches should relay this general message to the teachers so they will be prepared.

Observation Guidelines

At the very beginning of the classroom lesson, quickly sketch a seating chart. Assign numbers and randomly draw five numbers. Focus your observation on the behavior of five randomly selected students. Use Table I to write observation notes.

Divide the observation period into segments of 10 minutes each. For each of the five students observed, Note the following three things:

(a) Context / activity. This includes classroom organization (e.g., whole class discussion, cooperative small groups on joint tasks, computer work, etc.), type of activity (e.g., teacher read-aloud, teacher modeling, student guided practice), and materials used (e.g., the teacher handed worksheets, students work with their textbooks, no materials).

(b) Student behavior (e.g., verbal comment to teacher or peers, what the student is doing including listening, working on a computer, working in a small group, reading a book, especially, try to capture any problems or frustration such as incomplete work, trying to copy from classmates, or try to read and take notes of what the student is writing).

(c) Teacher behavior, especially focus on teacher behavior that may be directed to the observed student, the student group, or the challenge that the student is handling.

Table C-1. Classroom Observation Sheet

Segments (10 minute intervals) / Student	Student Name:	Student Name:	Student Name:	Student Name:	Student Name:
A	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:
B	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:
C	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:
D	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:
E	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:	Context / Activity: Student: Teacher:

At the end of the lesson, request the teacher to give you the written work of the students' observed or the joint products of the small groups they participated in.

For each of the five observed students, ask the teacher to identify the following information:

a. Student strengths and accomplishments

b. Student challenges and areas for further improvement

c. Copies of recent assessments (e.g., if READ180 is used, then ask for evaluation using the READ180 rubrics).

The teacher may email to you this information, however it is preferable to make copies on site to make sure that you have samples of student work.

Interview With the Reading Coach

Introduction

I have observed XX classes of the following teachers: [teacher names]. In those classes I observed a total of XX students.

For this evaluation of FLaRE we have collected information from coordinators and coaches about school-level work for instructional improvement. However, we do not yet know how the FLaRE support links to the ways in which teachers work to improve their students' skills. For that reason, I would like to focus my questions on students' needs and teachers' practices in the classrooms.

Question 1: Please list three instructional practices which are currently working well in the intensive reading classrooms.

a. What are the practices?

b. We would like to know what your criteria are for determining that something is "working well"? _____

c. In what ways do these three practices fit your criteria? _____

d. Are these practices a mandatory part of the reading program used in intensive reading classes? _____

e. Did you utilize FLaRE support in any way to learn more about those practices?

   Yes / No _____

f. If No to item e, please skip to Question 2. If Yes, please describe what the coordinator provided to you or to the teachers. Was this help requested by you or the teachers or was it initiated by the coordinator? _____

Question 2: Please list three instructional practices that are currently NOT working well (or could be improved in quality of implementation) in the intensive reading classrooms.

a. What does "Not working well" mean to you? _____

b. Why do you think these practices are not effective for these students? _____

c. To the best of our knowledge, what role do these practices play as part of the reading program used in intensive reading classes? (Eg, are they mandatory or optional?)_____

d. Have you used FLaRE support in any way to refine the implementation of these practices or replace them with strategies that may be more appropriate to these students? _____

e. If No to item d, please skip to Question 3. If yes, please describe what the coordinator provided to you or to the teachers. Was this help requested by you or the teachers or was it initiated by the coordinator? _____

Question 3: I would like to review with you my notes so far from classroom observations. I have noted students' engagement and participation in the various parts of the lesson.

a. Student I. Based on your familiarity with the student and these notes, what are the literacy challenges that this student needs to overcome? _____

b. What would you expect the teacher to do to help this student? _____

c. How would you utilize FLaRE support to improve this teacher interaction with this student? _____

d. Have you used FLaRE support in the past in such a way? _____

e. If No, skip to Question 4. If yes, describe how you or teachers in the school requested the coordinator's help and what the coordinator provided. _____

Question 4: I would like to select one other example from my observations so far.

a. **Student II**. Based on your familiarity with the student and these notes, what are the literacy challenges that this student needs to overcome? _____

b. What would you expect the teacher to do in order to help this student? _____

c. How would you utilize FLaRE support to improve this teacher interaction with this student? _____

d. Have you used FLaRE support in the past in such a way? _____

e. If No, skip to Question 5. If Yes, describe how you or teachers in the school requested the coordinator's help and what the coordinator provided. _____

Question 5: Thank you for your cooperation. Before we end this conversation I would like to give you the opportunity to add any other information about literacy in intensive reading classes in the school, about FLaRE, or the school in general. Do you have any questions for me?

_____

Appendix D: Results From HLM Analyses: Comparison by FLaRE Level

Table D-1. Number of Students by School and Academic Year: Comparison by FLaRE Level

		Academic year					
	School ID	2003–04	2004–05	2005–06	2006–07	2007–08	Total
FLaRE Level-1	31	230	290	228	330	287	1,365
	81	509	561	643	526	535	2,774
	131	302	335	340	403	377	1,757
	161	392	476	576	323	344	2,111
	251	57	49	64	66	58	294
	331	336	331	323	417	380	1,787
	351	278	288	276	253	385	1,480
	811	398	409	472	465	426	2,170
	853	75	69	92	79	81	396
	1181	377	407	378	397	417	1,976
	2081	510	512	525	466	493	2,506
	2331	650	666	538	540	494	2,888
	2651	425	401	433	504	527	2,290
	3421	500	521	511	523	539	2,594
	Total	5,039	5,315	5,399	5,292	5,343	26,388
FLaRE Level-3	301	437	498	522	491	557	2,505
	521	313	367	302	328	376	1,686
	601	651	0	578	518	486	2,233
	761	0	15	46	39	38	138
	861	432	419	379	358	432	2,020
	901	458	412	481	419	356	2,126
	1131	212	234	265	253	235	1,199
	1611	624	425	495	421	521	2,486
	1721	292	376	346	347	312	1,673
	3031	354	415	448	407	319	1,943
	Total	3,773	3,161	3,862	3,581	3,632	18,009

Table D-2. Adjusted Mean DSS and Standard deviations by FLaRE Level and Year: Comparison by FLaRE Level

	Adjusted Means by Academic Year									
	Preprogram Years						Intervention Years			
FLaRE Levels	2003–04		2004–05		2005–06		2006–07		2007–08	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Level 1	1,876.04	157.96	1,865.71	165.28	1,857.78	164.05	1,875.98	161.11	1,892.36	169.56
Level 3	1,865.25	161.04	1,843.93	160.06	1,834.21	157.25	1,852.99	159.01	1,899.72	164.6

Table D-3. Adjusted Mean Norm Equivalent Scores: Comparison by FLaRE Level

	2004–2005		2005–2006		2006–2007		2007–2008	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Level 1	533.32	94.82	565.74	91.48	525.25	93.6	561.62	97.13
Level 3	523.79	92.75	551.79	88.48	513.8	91.08	567.19	94.57

Appendix E: Results From HLM Analyses: Comparison of FLaRE to Non-FLaRE

Table E-1. Number of Students by School and Academic Year: Comparison of FLaRE to Non-FLaRE

	Number of students by school and academic year						
		Academic year					
	School ID	2003–04	2004–05	2005–06	2006–07	2007–08	Total
FLaRE	31	230	290	228	330	287	1,365
	81	509	561	643	526	535	2,774
	131	302	335	340	403	377	1,757
	161	392	476	576	323	344	2,111
	251	57	49	64	66	58	294
	331	336	331	323	417	380	1,787
	351	278	288	276	253	385	1,480
	811	398	409	472	465	426	2,170
	853	75	69	92	79	81	396
	1181	377	407	378	397	417	1,976
	2081	510	512	525	466	493	2,506
	2331	650	666	538	540	494	2,888
	2651	425	401	433	504	527	2,290
	3421	500	521	511	523	539	2,594
	Total	5,039	5,315	5,399	5,292	5,343	26,388
Non-FLaRE	301	437	498	522	491	557	2,505
	521	313	367	302	328	376	1,686
	601	651	0	578	518	486	2,233
	761	0	15	46	39	38	138
	861	432	419	379	358	432	2,020
	901	458	412	481	419	356	2,126
	1131	212	234	265	253	235	1,199
	1611	624	425	495	421	521	2,486
	1721	292	376	346	347	312	1,673
	3031	354	415	448	407	319	1,943
	Total	3,773	3,161	3,862	3,581	3,632	18,009

Table E-2. Adjusted Mean DSS and Standard Deviations by Study Condition and Year: Comaprison of FLaRE to Non-FLaRE

	Adjusted Means by Academic Year									
	Preprogram Years						Intervention Years			
FLaRE	2003–04		2004–05		2005–06		2006–07		2007–08	
Levels	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Level 1	1,849.57	164.78	1,810.86	174.62	1,838.92	174.12	1,839.61	179.71	1,870.11	179.09
Non-FLaRE	1,884.72	166.12	1,872.55	173.16	1,888.59	163.71	1,897.79	183.73	1,922.52	181.67

Table E-3. Adjusted Mean Norm Equivalent Scores: Comparison of FLaRE to Non-FLaRE

	2004–2005		2005–2006		2006–2007		2007–2008	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
FLaRE	498.12	108.34	542.68	97.96	513.5	106.48	569.92	105.63
Non-FLaRE	541.33	103.55	574.7	102.74	536.93	106.09	597.16	104.87

Appendix F: Number of Hours by Type of PD Activity—Level 2 and Level 3 FLaRE Schools

Table F-1. Hours of FLaRE Coordinators' Support to Level 2 Schools, by School Type

Support Categories	Mean Hours per Month	Standard Deviation	Minimum	Maximum
Elementary Schools, Level 2 (N=5 schools)				
Student Contact	0.17	0.24	0.00	0.50
Classroom Presence	0.08	0.17	0.00	0.38
Targeted PD	0.39	0.62	0.00	1.43
General PD	2.81	2.67	0.25	6.75
Middle Schools, Level 2 (N=8 schools)				
Student Contact	0.76	0.95	0.00	2.44
Classroom Presence	0.46	0.62	0.00	1.44
Targeted PD	0.52	1.15	0.00	3.13
General PD	2.92	3.12	0.00	8.25
High Schools, Level 2 (N=59 schools)				
Student Contact	0.56	1.05	0.00	5.25
Classroom Presence	1.01	1.72	0.00	8.63
Targeted PD	0.68	0.93	0.00	4.38
General PD	3.97	3.42	0.00	16.00

SOURCE: Monthly Coordinators' logs for the academic year 2007–08.

Table F-2. Hours of FLaRE Coordinators' Support to Level 3 Schools, by School Type

Support Categories	Mean Hours per Month	Standard Deviation	Minimum	Maximum
Elementary Schools, Level 3 (N=7 schools)				
Student Contact	0.00	0.00	0.00	0.00
Classroom Presence	0.38	0.64	0.00	1.38
Targeted PD	0.16	0.37	0.00	1.00
General PD	0.25	0.37	0.00	0.94
Middle Schools, Level 3 (N=9 schools)				
Student Contact	0.36	1.08	0.00	3.25
Classroom Presence	0.86	1.04	0.00	2.50
Targeted PD	0.71	1.12	0.00	3.05
General PD	3.32	5.07	0.00	12.38
High Schools, Level 3 (N=33 schools)				
Student Contact	0.14	0.32	0.00	1.31
Classroom Presence	0.77	1.46	0.00	4.50
Targeted PD	0.60	1.08	0.00	4.08
General PD	2.21	3.33	0.00	14.19

SOURCE: Monthly Coordinators' logs for the academic year 2007–08.

Appendix G: Parameter Estimates for Regression Analysis: Types of PD Activities and Student Reading Achievement

Table G-1. Predicted PD Hours: Classroom Presence

	Point Estimate	Added Hours	*t-ratio*	SE	*p*-value
Distribution of Level 1 High Schools by School Size					
Lowest Quartile: 97 to 966 students	1.54	6.50	2.64	0.59	0.0094
Second Quartile: 1,027 to 1,717 students	–0.23	–43.30	–0.38	0.59	0.7039
Third Quartile: 1,728 to 2,226 students	0.14	73.70	0.34	0.42	0.7314
Top Quartile: 2,246 to 4,291	–0.01	–1312.00	.	.	.
Distribution of Level 1 High Schools by Percentage of Students Eligible for Free/Reduced-Price Lunch					
Lowest Quartile: 13.7% to 41.8%	0.56	17.80	0.66	0.57	0.5096
Second Quartile: 42.0% to 51.3%	–0.03	–382.30	–0.48	0.44	0.6295
Third Quartile: 51.8% to 63.6%	–0.01	–771.00	–0.37	0.54	0.7088
Top Quartile: 64.5% to 90.9%	0.19	53.40	.	.	.

Table G-2. Predicted PD Hours: General PD

	Point Estimate	Added Hours	*t-ratio*	SE	*p*-value
By School Size					
Lowest Quartile: 97 to 966 students	0.30	33.50	2.59	0.14	0.0106
Second Quartile: 1,027 to 1,717 students	–0.10	–99.20	–0.28	0.17	0.7775
Third Quartile: 1,728 to 2,226 students	0.04	260.10	0.67	0.14	0.5052
Top Quartile: 2,246 to 4,291	–0.05	–187.80	.	.	.
By Percentage of Students Eligible for Free/Reuced Lunch					
Lowest Quartile: 13.7% to 41.8%	0.17	58.00	0.98	0.14	0.3271
Second Quartile: 42.0% to 51.3%	–0.07	–149.60	–0.62	0.17	0.5375
Third Quartile: 51.8% to 63.6%	–0.06	–182.70	–0.60	0.15	0.5484
Top Quartile: 64.5% to 90.9%	0.04	264.20	.	.	.

Table G-3. Predicted PD Hours: Targeted PD

	Point Estimate	Added Hours	*t-ratio*	SE	*p*-value
By School Size					
Lowest Quartile: 97 to 966 students	0.60	16.50	2.35	0.44	0.0206
Second Quartile: 1,027 to 1,717 students	0.07	141.70	0.68	0.72	0.4985
Third Quartile: 1,728 to 2,226 students	–0.08	–132.30	0.66	0.53	0.513
Top Quartile: 2,246 to 4,291	–0.42	–23.80	.	.	.
By Percentage of Students Eligible for Free/Reduced-Price Lunch					
Lowest Quartile: 13.7% to 41.8%	0.88	11.40	1.80	0.51	0.0748
Second Quartile: 42.0% to 51.3%	–0.10	–99.10	–0.12	0.48	0.9047
Third Quartile: 51.8% to 63.6%	0.01	1147.00	0.10	0.54	0.9237
Top Quartile: 64.5% to 90.9%	–0.04	–232.50	.	.	.

Table G-4. Predicted PD Hours: Student Contact

	Point Estimate	Added Hours	*t-ratio*	SE	*p*-value
By School Size					
Lowest Quartile: 97 to 966 students	0.77	12.90	1.53	0.49	0.1288
Second Quartile: 1,027 to 1,717 students	–0.13	–79.60	–0.34	0.46	0.7371
Third Quartile: 1,728 to 2,226 students	0.37	27.20	0.68	0.50	0.4971
Top Quartile: 2,246 to 4,291	0.03	347.90	.	.	.
By Percentage of Students Eligible for Free/Reduced-Price Lunch					
Lowest Quartile: 13.7% to 41.8%	0.68	14.80	0.81	0.56	0.4206
Second Quartile: 42.0% to 51.3%	–0.32	–31.40	–0.92	0.60	0.3617
Third Quartile: 51.8% to 63.6%	–0.06	–179.50	–0.57	0.50	0.5721
Top Quartile: 64.5% to 90.9%	0.23	44.20	.	.	.