



INSIGHT

Lessons learned from the CORAL initiative

Advancing Achievement

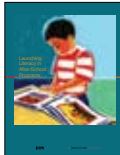
*Findings from an Independent Evaluation
of a Major After-School Initiative*

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PPV *Public/Private Ventures*

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Early Lessons from the CORAL Initiative

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A Report on The James Irvine Foundation's CORAL Experience

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Advancing Achievement

Findings from an Independent Evaluation of a Major After-School Initiative

Presents findings from independent research on CORAL. Demonstrates the relationship between high-quality literacy programming and academic gains. Informs the after-school field of the potential role of quality programs in the ongoing drive to improve academic achievement. Includes executive summary.



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After-School Toolkit

Tips, Techniques and Templates for Improving Program Quality

Provides a practical, hands-on guide for implementing high-quality after-school literacy programming. Supplies program managers with tested tools and techniques employed in CORAL.



Gaining Ground

Supporting English Learners Through After-School Literacy Programming

Demonstrates a relationship between key CORAL approaches and the academic progress of English learners. Makes the case for action by policymakers and funders interested in boosting the achievement of this growing student population.

Foreword

The role of after-school programming is in transition. In the past, after-school programs provided mainly homework help and fulfilled a childcare need for parents. Increasingly, private and public funders and other stakeholders view the after-school hours as an important time to improve student achievement and to complement learning within a school setting. This change in what we have come to expect of after-school programming demands that we learn and share what works — and what doesn't — as we aim to improve student achievement. That is the focus of this report.

In support of our mission to expand opportunity for Californians and to advance their educational and economic prospects, The James Irvine Foundation launched in 1999 the largest program initiative in its history: Communities Organizing Resources to Advance Learning (CORAL), an eight-year, \$58 million effort to improve the educational performance of low-achieving students in five California cities.

During the school years from 2004 to 2006, the Foundation engaged Public/Private Ventures (P/PV) to evaluate the CORAL initiative. P/PV is a national nonprofit organization whose mission is to improve the effectiveness of social policies, programs and community initiatives, especially as they affect youth and young adults. P/PV served as a key independent partner in helping to reorient the focus of CORAL after a midcourse assessment revealed disappointing student outcomes. The firm also brought a rigor and discipline in implementing these changes, helping to pave the way for the initiative's eventual successes, including achievement of measured gains in reading levels by participants receiving consistent, quality literacy programming after school. Along the way, P/PV documented CORAL outcomes, lessons learned and promising strategies for boosting student achievement through after-school programming.

Findings from the CORAL experience offer new insight for those who strive to advance, fund, design and implement effective after-school programs. We remain committed to identifying ways to share these findings and lessons broadly to ensure the success and advancement of this important work.



James E. Canales

President and Chief Executive Officer

The James Irvine Foundation

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Several other people also provided invaluable assistance. Adrienne Smythe developed the management information system for the CORAL programs, which allowed the programs and evaluators to track enrollment and attendance data. Population Research Systems coordinated and administered the Independent Reading Inventories and surveys of CORAL children and their parents throughout the state. We wish to thank Lisa Wasserman, who oversaw the process, and the number of data collectors who traveled throughout the state to administer the assessments and surveys. In its early stages, this report benefited from comments and suggestions made by Jacqueline Eccles, Jodie Roth, Gary Walker and Karen Walker.

With the contributions of these and other individuals and groups, the CORAL initiative helped shed new light on the potential of after-school programs to advance student success in the classroom. The insights gathered during this process formed the basis for this and other publications. It is the hope of both The James Irvine Foundation and Public/Private Ventures that, in sharing the CORAL lessons, we help practitioners, funders and policymakers better serve the neediest youth.

Executive Summary

Context: After-School Evaluations

There is widespread agreement — among parents, policymakers and educators — that after-school programs can and should provide developmentally appropriate places for youth, offering safety, structure and supportive adults, and exposure to new and different experiences that create opportunities for healthy growth and development.¹ For more than a decade, funding has increased for programs that provide these kinds of developmentally appropriate supports and opportunities. At the same time, there has been an increased focus on utilizing these after-school hours to help improve children's academic achievement.²

By the early 2000s, however, several evaluations of the largest-scale after-school programs began to report findings suggesting that at least one of their major goals — supporting academic gains — might be beyond their reach.³ The evaluations also highlighted two critical issues that could be impeding more positive results: First, many of the programs attempted to achieve academic gains only by providing homework help or through inconsistent or poorly implemented academically oriented activities;⁴ and, second, many of the children who were enrolled were not participating on a regular or sustained enough basis for the programs to be expected to influence their achievement.⁵ In addition, recent research has suggested that children's engagement in after-school programs — for example their sense of belonging to, and interest in, the programs — may be an important contributor to the programs' ability to influence children's achievement and behaviors. These three issues — quality, participation and engagement — have thus increasingly interested funders and researchers who are exploring the effectiveness of after-school programs.⁶

The current evaluation of the Communities Organizing Resources to Advance Learning (CORAL) initiative was designed in late 2003 as the results of these large-scale after-school program evaluations were just emerging. Thus, it offered a timely opportunity to explore the effectiveness of an after-school initiative that took a targeted approach to delivering high-quality literacy programming, within a broader array of activities intended to engage children in the after-school hours. The data collected and analyzed for this evaluation of the final two years of the initiative (from 2004 to 2006) allow us to measure and link quality, participation, engagement and outcomes — advancing our knowledge of strategies likely to make a difference for children.

CORAL Evaluation and Evolution

In the 2004–2005 school year, when the current evaluation began, total CORAL enrollment statewide was 5,321, ranging from 585 to 2,081 across the cities. Most youth served were elementary-school aged, and they came from varied backgrounds and cultures. The highest percentage were Latino/a (about 68 percent), followed by African American and Asian American youth. Over half (53 percent) of CORAL children were designated English learners, and 89 percent, overall, were recipients of free or reduced-price lunch.

Their scores on the California Standards Test-English Language Arts (CST-ELA), from Spring 2004, show that only a small portion (16 percent) met or exceeded the grade-level proficiency standards for reading. Of the sample explored in most depth in this evaluation, 50 percent were reading two or more grades below level, and an additional 20 percent were reading one grade below level.

The initial CORAL philosophy reflected best practices in the fields of youth development programming and community initiatives, including an emphasis on consistent staffing to promote positive adult-youth relationships, and policies and practices designed to

COMMUNITIES ORGANIZING RESOURCES TO ADVANCE LEARNING (CORAL)

The James Irvine Foundation launched the eight-year CORAL after-school initiative in 1999 with the goal of helping to improve the academic achievement of children in the lowest-performing schools in five California cities: Fresno, Long Beach, Pasadena, Sacramento and San Jose.

Once fully operational, this large-scale initiative served approximately 5,000 children each year — more than half of whom were designated as English learners and many of whom came from low-income families — across over 30 school- and community-based sites. Most of the youth were of elementary-school age, primarily first- to fifth-graders, with a small proportion in middle-school grades. The Foundation provided implementation support in all of the cities, with the objective of funding the initiative for five to six years in each site. In total, the Foundation committed over \$58 million to CORAL, making it the most significant and ambitious initiative undertaken by Irvine.

Following disappointing outcomes identified through a midpoint review, CORAL focused the wide breadth of programs offered at its sites on literacy activities and boosted program quality through a rigorous process of continuous improvement and staff development. These changes led to pronounced gains in achievement for a range of students.

The children involved in CORAL represented great diversity in their ethnicity and language proficiency and also, to some degree, in their performance at school. This diversity adds dimension to an examination of the role that after-school programs can play in the lives of different subgroups of youth and, in particular, English learners—a topic often missing in after-school research.

CORAL offers several key lessons to those with a stake in the success of after-school programs. Chief among the lessons are that after-school programs can, indeed, help promote student academic achievement, and that success requires targeted investment, stakeholder commitments, focused academic support, quality programming, and a process of continual improvement to attain and maintain high levels of quality.

foster regular and ongoing youth participation. While all the CORAL cities shared the goal of improving youth's academic achievement, the initiative, during its early years, had broad guidelines for implementation. As a result, there was great variation across the state in the approach and content of the after-school programs. While the sites typically provided youth with some mix of homework help and enrichment activities, the programming ranged from primarily a science-based enrichment curriculum, to mostly homework help, to a focus on art and cultural experiences.

In 2003, at approximately the mid-point of the initiative, results from a study of CORAL's early outcomes conducted by SRI International, suggested that the cities were struggling with serious implementation issues. Participant numbers fell short of agreed-upon goals, and the cost per participant was more than double what was widely considered reasonable. In addition, the study indicated that, with a few exceptions, the

programming — which, aside from “homework help,” consisted almost entirely of enrichment activities — was of relatively low quality.⁷

In response to these concerns about quality, participation and cost — and to the accumulating evidence that after-school programming focused primarily on enrichment and homework help does not have an impact on academic achievement — the Foundation determined to intensify CORAL's educational focus. Public/Private Ventures (P/PV) was asked to assist in this work and to evaluate the results.⁸

To reduce variability among the sites and increase the likelihood that the initiative, as a whole, would achieve its intended goals, CORAL, in Fall 2004, adopted a much more targeted approach for its academic component: the implementation of literacy programming three to four days a week, for 60 to 90 minutes each day, that focused on concrete strategies for helping

children far behind in reading skills improve, while also bringing literature and reading to life for the children. This programming was based on the core strategies of balanced literacy, a model that reflects current research on developing competent readers. These strategies include:

- **Read alouds** — staff read stories (or, occasionally, nonfiction books) to the children, including short books that can be read in 10 or 15 minutes and chapter books that are read over the course of several days.
- **Book discussions** — staff lead the children in talking about the story that has just been read.
- **Writing activities** — the children write about topics they have just discussed or create their own stories.
- **Vocabulary activities** — the children review words or learn new words.
- **Skill-development activities** — the children practice particular literacy skills, such as letter sounds or spelling.
- **Independent reading** — the children spend time reading books of their choice at a level where they can read fluently and with high comprehension.

After the introduction of these balanced literacy strategies, CORAL programs continued to provide children with enrichment opportunities and, in most cities, reserved time for homework help in the remaining portion of each day's after-school programming.

As in previous years, the children were generally divided into groups based on grade level. Each group consisted of 12 to 20 children and was led by one or two staff members, called team leaders, who supervised the children and were also typically responsible for planning and leading literacy activities.

An interim report, *Launching Literacy in After-School Programs*, based on data collected in the first year after the shift to literacy programming (the 2004–2005 school year), describes the CORAL cities' successes and challenges in implementing the literacy component and examines the relationship between quality programming and the children's gains in reading during that first year.⁹ The final report (on which this executive

summary is based) presents research conducted over a two-year period, focusing on changes in the quality of the literacy programming during that time, the extent of the children's participation and engagement in CORAL, and the relationship of each factor — quality, participation and engagement — to positive changes in children's reading performance and attitudes. In addition, the report discusses the costs of CORAL, including the cost of the investments in quality, in terms of staffing, training, program monitoring and books.

Summary of Findings from the Two-Year Evaluation of CORAL

The findings described in this report have been drawn from data collected from multiple sources between Fall 2004 and Summer 2006, including enrollment, attendance, activity and participation data from each city's management information system (MIS); scores from the CST-ELA from Spring 2004, 2005 and 2006; interviews with program and partner agency staff; and a cost survey. The evaluation focuses on a subset of four to five sites in each of the five CORAL cities and follows a sample of children who were in the third and fourth grades in Fall 2004 and then in the fourth and fifth grades in the second year of the study. For these intensive research sites and grade levels, extensive observations of on-the-ground programming were conducted, parents completed surveys, and children completed surveys and individualized reading assessments at multiple time points.

This data collection strategy allows us to link these data together and describe important patterns of relationships between the quality of programs, participation, engagement and outcomes. Thus, the results of the study are informative for program designers, funders, researchers and policymakers who are interested in the specific practices that make after-school programs effective for children. The diversity of the children involved in CORAL — in their ethnicity and language proficiency and also, to some degree, in their performance at school — adds to our ability to examine the role of after-school programs for different subgroups of youth, in particular, English learners, a topic often missing in after-school research.¹⁰

Key Findings

Children’s reading success was strongly related to the quality of literacy programming. CORAL participants showed greater gains in grade-level reading and performed better on standardized tests when they were exposed to more consistent and higher-quality literacy activities.

Results from the first year of the evaluation indicated greater gains over five months on the individualized reading assessment (.45 grade-levels in reading) for children exposed to consistent implementation of the balanced literacy strategies — read alouds, book discussions, independent reading, writing, vocabulary development and skill development activities — and higher-quality implementation of those strategies. In contrast, those children exposed to inconsistent or low-quality implementation of the literacy strategies gained just .26 grade-levels in reading.

In the second year of the evaluation, when almost all of the staff leading the literacy activities had improved and were consistently using the literacy strategies, the average reading gain for all children in the sample (based on the individualized reading assessment) was .44 grade levels — comparable to the average gain of .45 for children exposed to higher-quality activities during Year One. Also in Year Two, children in groups where team leaders used stronger classroom practices (the instructor offered strong adult support, was skilled at group management, provided high-quality instruction and made connections between the children’s lives and the books they were reading) in combination with more consistent and higher-quality implementation of the literacy strategies were more likely to have a positive outcome on the CST-ELA test. (A positive outcome was defined as moving from “far below basic” or “below basic” up to a higher level, or remaining “basic,” “proficient” or “advanced” from one year to the next).

The evaluation design did not include a comparison group; therefore, we cannot firmly conclude that the gains made by the CORAL youth are any different from what might be expected had they not taken part in the program.

However, the finding that the quality and consistency with which CORAL instructors delivered the literacy programming are related to reading-level gains and improvement on the CST-ELA suggests that the program has had some bearing on these gains.

Higher levels of engagement in CORAL were related to positive changes in children’s attitudes toward reading as well as attitudes and behaviors in school.

Children’s engagement in CORAL, as measured by their sense of belonging, was an important contributor to changes in 10 of the 13 outcomes examined in the areas of reading attitudes, as well as school attitudes and behaviors. That is, the stronger the children’s sense of belonging to the program, the more likely they were to have a positive change in outcomes that included enjoyment of reading, liking and wanting to go to school, and time spent reading after school. (Children’s levels of participation in CORAL were not related to changes in these outcomes.)

Because children’s sense of belonging emerged as such a strong predictor of positive changes in outcomes, additional analyses were conducted to understand whether the observed program quality ratings (that is, the literacy strategies and classroom practices) might be associated with children’s sense of belonging to the CORAL programs. But no such relationship was apparent. However, children’s perceptions of CORAL as a place with positive peer relationships (i.e., they liked the other children there, got to know them very well, and had a lot of friends there) and how safe they felt in CORAL (as measured in Fall 2004) were positively related to their sense of belonging (measured in 2006).

The findings were promising for the diverse group of children served by CORAL, including the large number of English learners (53 percent) and children performing far-behind in reading. Both of these subgroups showed similar gains when compared to their CORAL peers.

This study provided important information on the role of after-school programs for English learners, a rapidly growing population in California and throughout the United States. Slightly more than half (53 percent) of the children in the CORAL study were identified as English learners, a greater proportion than documented in other studies of after-school programs.¹¹ English learners gained as much as English-proficient children who had the same level of participation and were exposed to the same level of quality.

Findings from this evaluation also demonstrate that an after-school program can benefit children who are far-behind in reading. Children who were two or more grade levels behind in reading based on the individualized reading assessments gained just as much as their higher-achieving counterparts over the same period of time.

Without a comparison group, it is difficult to place these findings in context. However, previous studies have suggested that children from low-income families may fall further and further behind in reading between first and fourth grades. The CORAL experience offers promise in that the children who were most behind and those who were English learners kept pace in their gains.

Beneficial Program Characteristics

In addition to these promising outcomes for the children involved in CORAL, the evaluation also identified crucial program achievements and characteristics that laid the groundwork for the positive benefits participants derived. These include:

CORAL sites were able to increase the quality of their literacy programming relatively quickly. By the end of the second year of implementation almost all (88 percent) of the literacy activities observed had reached a moderate level of quality. This was a key achievement, as quality was found to be related to children's reading gains.

In Fall 2004, the CORAL programs began the process of incorporating 60 to 90 minutes of literacy, three to four afternoons per week, into their existing array of enrichment and recreational activities. At the end of the first year of the evaluation, about one-third (36 percent) of the groups observed were reaching a moderate level of consistency and quality in their implementation of the literacy program model. The CORAL city directors and staff drew on information from the first-year evaluation, as well as lessons learned from their own experiences, as they developed approaches for improving the quality of their programming. Their efforts included having an effective literacy director in place, targeting trainings for team leaders, monitoring and coaching on a regular and ongoing basis, and focusing on strengthening the independent reading component of the balanced literacy lessons.¹² By the end of the second year of balanced literacy implementation, 88 percent of the observed groups had achieved at least a moderate level of quality in their literacy programming.

The children enrolled in the CORAL programs had high levels of participation and a strong sense of engagement.

Children attended CORAL an average of 110.3 days over the 2005–2006 school year (an overall average attendance rate of 73 percent of the days the program was open), or an average of 3.0 days per week. Overall, 69.3 percent attended more than 75 days during the year. These attendance rates appear particularly strong when compared to other studies of after-school programs. A first-year evaluation of the 21st Century Community Learning Centers, for example, found that children attended an average of 58.3 days over the year, and only 16.9 percent attended more than 75 days of programming.¹³ A review of 73 after-school programs found 11 programs with youth attendance ranging from 15 percent to 26 percent, and an additional three programs with attendance ranging between 26 and 50 percent.¹⁴ The remaining programs did not have attendance data available.

Beyond rates of attendance, other findings suggest that the children were highly engaged in CORAL. Positive adult-youth relationships and a strong sense of belonging to CORAL appear to be the strengths of the program. Almost all children (97 percent) reported that there was at least one adult at CORAL who supported them and to whom they could talk, and 73 percent indicated that there were two or more such adults. More than 85 percent of children agreed that staff in literacy activities paid attention to and cared about them. More generally, CORAL seemed to be a safe space for children, where they felt comfortable and cared for. About 90 percent of children agreed that they felt safe at CORAL. Almost three-quarters of the children (71 percent) agreed that they felt that they belonged at CORAL.

CORAL demonstrated that after-school programs can provide dynamic and fun programming that blends academics and enrichment activities in a way that is beneficial to children and meets the needs of other constituents, including parents and schools.

CORAL was designed to meet multiple needs: to help boost the academic achievement of children who were struggling in their efforts to learn to read and to provide them with enriching experiences that they might otherwise not have access to; the program was also designed to let the children have fun.

Overwhelmingly, parents indicated that they enrolled their children in CORAL to help them do better in school. According to reports from parents, the program was meeting that goal. Over 90 percent of parents (98 percent of those with children still enrolled and 91 percent of those with children no longer attending) indicated that CORAL helped their child do better in school.

Schools, under pressure to increase the academic standing of their students, were interested in after-school literacy programming, but enrichment activities were also of particular importance to them because many of the schools lacked time during the school day or money in their budgets for activities such as art, music or dance. CORAL provided an array of literacy support, homework help, enrichment and physical education activities to meet these interests and needs.

Children responded positively to the CORAL programming, with almost three-quarters reporting they liked literacy activities, and close to 90 percent reporting they liked the enrichment and physical activities. Interviews with CORAL staff revealed the importance they placed on making literacy programming fun for children. They did so by finding and reading books the children were interested in, having engaging conversations about the books, and drawing connections between the stories read and the children's lives.

Costs for providing CORAL's combined academic and enrichment program (just under an estimated \$20 per day for each child in attendance) were similar to costs of other after-school programming.

Results from a survey of staff in four of the CORAL cities¹⁵ about costs associated with running the CORAL program suggest an average per diem per child cost of slightly under \$20. This figure takes into account site-level costs along with the administrative and oversight costs incurred by the cities' lead agencies. It also takes into account city-level (and, to a lesser extent, the site-level) costs directly related to providing high-quality literacy programming — including the expenses associated with hiring a literacy director, training team leaders, monitoring quality of instruction, and obtaining an adequate number of books for independent reading.

The costs of CORAL are in keeping with costs associated with several other large-scale after-school programs; however, they are greater than the cost assumed by public funding, for example 21st Century funding (which provides approximately \$1,000 per child per year, or \$7 or \$8 per day) or the California Proposition 49 funding, which has recently become available and offers \$7.50 per day plus a required \$2.50 match from individual programs.¹⁶

Beyond these site- and city-level costs, The James Irvine Foundation provided additional funding at the statewide level (for the CORAL initiative as a whole) that helped lay the groundwork for implementation of a high-quality program in each city. A significant portion of the additional funding was used to develop a computerized management information system to enable the CORAL programs to track enrollment (e.g., demographic data), participation trends and outcomes data — information that was critical for the programs to be able to identify whom they were serving, whether they were reaching goals for attendance, and the degree to which they were achieving other program goals. Developing this system in conjunction with city-level staff and training staff to use the system initially cost between \$20,000 and \$25,000 per city. Initiative-level funding also included approximately \$140,000 for technical assistance expenses during each of the first

two years of implementing the literacy component, and \$60,000 each year of the evaluation for researchers' time in conducting observations of the literacy lessons on a regular basis and providing feedback to the sites.

Implications for Programs, Research and Policy

The results of the CORAL evaluation have important implications for the after-school field, including practitioners, researchers, and policymakers interested in the potential of after-school time to provide children with enriching experiences and academic support. Several key lessons emerge:

When considering CORAL's success in promoting gains in literacy, it is important to keep in mind that these results are likely the product of a “mixed” program that combined quality literacy instruction with enrichment activities and homework help.

While a comprehensive assessment of the quality of the non-literacy programming and its link to children's outcomes was beyond the scope of this report, key stakeholders — including participating youth, their parents and school staff — viewed CORAL's enrichment programming as an important factor in engaging children in the program. And, children's engagement in CORAL was related to positive changes in their attitudes toward reading as well as their attitudes and behaviors in school.

At the same time, enrichment programming, while clearly a critical element of CORAL, did not receive the same level of attention or funding in each city during the time frame of this evaluation. While some cities continued to use outside community-based organizations to plan and lead activities, others had their team leaders provide enrichment programming. In either circumstance, non-literacy programming did not receive the same type of monitoring and support as literacy programming, and its quality is less certain.

As a result, the CORAL directors acknowledged that they need to turn their attention to enrichment activities. Presumably, the same strategies that

promoted higher-quality literacy programming (including training, monitoring and coaching) can be applied to enrichment programming as well.

Thus, other program sites interested in adopting the CORAL approach are advised to take similar care to ensure that the literacy programming is embedded in a broader context of enrichment programming.

Increasing the quality of a targeted literacy component is clearly possible, but it requires focused effort. Program staff’s access to crucial data on program quality and practices and the ways in which they were able to use that information for program improvement were critical components of their success.

The increase in quality achieved by the CORAL cities between Year One and Year Two was crucial to the reading gains achieved by participating youth. Getting to this level of quality, and doing it so quickly, was a process driven by data. Program administrators had access to data from observations and Year One evaluation findings that revealed a correlation between quality and outcomes, providing them with crucial direction for program improvement and the evidence necessary to convince key stakeholders (including parents and school administrators) of the importance of these changes.

By the second year of evaluation, all the cities had invested in factors that the first-year evaluation findings suggested led to better quality. Perhaps most crucially, the evaluation spotlighted the importance of the role played by the literacy director in providing initial and ongoing training to site staff on successful literacy strategies, in regular monitoring of on-the-ground programming, and in coaching to help support the team leaders and site coordinators. City directors used this information to more clearly define and strengthen the literacy director’s role, to develop improved and targeted training, and to implement consistent program monitoring followed up with feedback and coaching. The evaluation also highlighted the importance of the independent reading time and of having a large enough

volume and variety of books for children to read. As a result, CORAL cities invested in more books for the children. In addition, CORAL city directors built on this strategy of using data to help identify strengths and weaknesses of program implementation. By the second year of evaluation, program staff began to make the transition to generating their own observation data so they could continue to identify and address gaps in the consistency and quality of the literacy activities. All of these efforts were resource intensive both in terms of dollars and staff time. However, they all led to stronger programming during the second year of implementation of literacy activities.

The fact that English learners achieved academic gains in equal measure to other children in the program deserves particular attention. In the current environment of scarce resources for academic support, and the evolving demographic profile of the children in this country, these results take on added significance.

Since they started further behind in their English literacy skills, it is particularly noteworthy that English learners gained just as much as English-proficient youth through their participation in the CORAL program. Other after-school programs may want to consider ways to increase English learner access to their programs, if they are not already encouraging these children to participate.

In considering this, however, it is important to note that the findings from this study do not support the idea that the CORAL approach be directed exclusively at English learners. The CORAL classes comprised children with a mix of language backgrounds and achievement levels. While outside the scope of this study, it is likely that participants in the CORAL program may have benefited from experiencing programming with other children of diverse abilities and characteristics. It may, then, also be important to avoid using the CORAL approach as an overly targeted intervention, and instead consider its utility as an approach that benefits a wide variety of children.

The accumulation of results from this evaluation is promising but not conclusive. Future experimental design studies of programs that focus on this population of children, reach a moderate to high level of quality in implementing this type of literacy programming, and garner similarly high rates of participation and engagement would constitute an important addition to the body of knowledge on after-school program effectiveness.

The findings from this study suggest that quality and engagement are important for promoting positive outcomes across all subgroups of children. Higher-quality programming was consistently related to better reading performance outcomes, and children's sense of belonging was related to positive change on 10 of the 13 outcomes measured regarding their attitudes toward reading and attitudes toward, and behaviors in, school.

Because the study does not have a comparison group, it is possible that motivational factors related to children's involvement in or sense of belonging to CORAL may be linked to the positive gains documented. Despite the lack of a comparison group, however, the findings point to important associations worth exploring in more depth via future research.

Conclusion

The CORAL initiative's transition to a balanced literacy approach emerged amid a larger transition in the after-school field, in which practitioners and policymakers are reevaluating the role of the after-school hours and becoming more attuned to the importance of quality programming and engagement among participants. Consequently, the evaluation of CORAL provides important guidance not only from a programmatic standpoint, but also from a public policy perspective. An understanding of the ways in which CORAL has engaged children in quality programming, and the relationship of engagement and quality programming to academic outcomes, has drawn further attention to the potential role for after-school programs in the ongoing drive to improve children's academic achievement.

Executive Summary Endnotes

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- ⁷ Kathleen Hebbeler, et al. *Implementation of Communities Organizing Resources to Advance Learning (CORAL) in 2002–03*. Palo Alto, CA: SRI International, October 2003.
- ⁸ For a full description of the change in approach and the reasons behind it, see Gary Walker. *Midcourse Corrections to a Major Initiative: A Report on The James Irvine Foundation's CORAL Experience*. San Francisco, CA: The James Irvine Foundation, 2007.
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- ¹⁰ Durlak and Weissberg, 2007.
- ¹¹ This variable was not a consideration in the 73 studies reviewed by Durlak and Weissberg, and few other studies have considered how after-school programs serve this population of youth.
- ¹² A separate report based on learnings from the CORAL initiative focuses on the specific strategies that the CORAL cities used to promote higher-quality literacy programming. See Jessica Sheldon and Leigh Hopkins. *Supporting Success: Why and How to Improve Quality in After-School Programs*. San Francisco, CA: The James Irvine Foundation and Public/Private Ventures, 2008. *Launching Literacy* also provides more detail on each of these implementation factors as they related to program quality in the first year of the initiative.
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- ¹⁴ Durlak and Weissberg, 2007. The programs in the review included drop-in programs and programs for older teens, which may account to some extent for the lower rates of attendance.
- ¹⁵ At the time of the cost survey, one of the CORAL cities was undergoing a transition in staffing and structure, and was not in a position to participate in the cost analysis.
- ¹⁶ For costs of other after-school programs, see Robert Halpern, Julie Spielberger and Sylvan Robb. *Evaluation of the MOST (Making the Most of Out-of-School Time) Initiative: Final Report and Summary of Findings*. Chicago: Chapin Hall Center for Children; Walker and Arbreton, 2004; and Jean Baldwin Grossman et al. *Multiple Choices After School: Findings from the Extended-Service Schools Initiative*. Philadelphia: Public/Private Ventures, 2002. For information on support offered by public funders, see "21st Century Community Learning Centers Providing Afterschool Supports to Communities Nationwide." Afterschool Alliance. Retrieved February 7, 2007, <http://www.afterschoolalliance.org/21stcclc.pdf>; and the California Department of Education description of CA Senate Bill 638, at <http://www.cde.ca.gov/ls/ba/as/ases06fundingfaq.asp>. Retrieved August 24, 2007.

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CHAPTER I

Introduction

There is widespread agreement — among parents, policymakers, advocates and educators — that after-school programs can and should provide developmentally appropriate places for youth, offering safety, structure and supportive adults, and exposure to new and diverse experiences that create opportunities for healthy growth and development.¹ For more than a decade, funding has increased for after-school programs that provide these types of developmentally appropriate supports. At the same time, there has been increased focus on utilizing after-school hours to improve children’s academic achievement, prompting important questions about the role — and potential — of after-school time.²

The Growth of Academics in After-School Programs

In the 1990s, many proponents of after-school programs began to advocate for expanding their goals to include at least some focus on reducing the achievement gap between students of different racial, ethnic and economic backgrounds.³ Public and private funders increasingly expected programs to have academic outcomes.⁴ One example was the privately funded Extended-Service Schools initiative, which, beginning in 1997, supported the creation of 60 after-school programs across the country; each was intended to include academic development among its goals.⁵ The most prominent example of this shift toward academics, however, has been the federally funded 21st Century Community Learning Centers (21st CCLC) program. Launched in 1998, it offered more than 1,600 grants that provided an array of out-of-school-time services to children across the country.⁶ When the No Child Left Behind Act reauthorized 21st CCLC in 2002, it placed new emphasis on programs’ inclusion of academic enrichment activities intended to help students meet state and local achievement standards.⁷

The 21st CCLC spurred several efforts to build sustainable after-school structures, including statewide efforts in California, Connecticut, Georgia, Illinois, North Carolina, Pennsylvania and Tennessee.⁸ Efforts in California, in particular, are being watched with great interest by funders, practitioners and policymakers across the country. In 2002, more than 55 percent of California voters approved Proposition 49, which

increased funding for the After School Education and Safety Program from \$121 million per year to \$550 million. The program was to be implemented at an unspecified future date when the state budget allowed. In the 2006–2007 school year, the funds became available, and the California Department of Education began to disburse them. To receive the funds under Prop 49, programs must provide tutoring and/or homework assistance, as well as additional services that reinforce and complement local schools’ curricula. The California Department of Education recertifies after-school programs every three years based on academic performance, attendance outcomes and positive behavioral changes.⁹

Literacy in After-School Programs

In the last decade, one particular academic area — literacy — has taken on a greater urgency for after-school programs, in large part because of national attention to the goal of having all children reading at grade level by third grade. Recent results of the National Assessment of Educational Progress, also known as the “Nation’s Report Card,”¹⁰ suggest that, in spite of the No Child Left Behind mandate that schools show yearly improvement on the test scores of youth in all categories, minority children continue to fare far worse on reading and math proficiency.

Despite schools’ efforts to improve the literacy levels of all students, a significant number of children in low-income, poor-performing schools are far behind in reading. Many schools face the additional challenges of developing language skills and academic proficiency among children of non-English speaking families. Amid debate about the best way to help English learners in school, research indicates that they can take three to five years to develop oral language proficiency and four to seven years to develop the academic English proficiency apparently needed for scoring well on standardized tests.¹¹ In states such as California, where more than 25 percent of public school students are English learners and more than 40 percent of all public school students speak a language other than English in their homes, there is acute interest in how after-school programs might work with and improve literacy skills for children of all language backgrounds.¹²

Measuring Academic Outcomes

After-school programs with goals of academic improvement for participants burgeoned in the 1990s. But by early 2000, findings from studies of several of the largest after-school efforts revealed that the academic component was frequently of poor quality or limited to homework help, and the programs were not leading to positive academic outcomes for participants.¹³

In response to these evaluations, a number of after-school programs began to introduce more specific, targeted academic curricula into their larger array of activities.¹⁴ A recent meta-analysis of the evaluations of 73 after-school programs designed to promote personal and social skills and academic gains found that programs featuring a “SAFE” (sequenced, active, focused and explicit) approach were most likely to achieve their outcomes of interest, including increased test scores and grades.¹⁵ Along similar lines, evaluations of the LA’s BEST and TASC after-school programs suggest that having a structured academic curriculum as part of a range of program offerings is related to positive achievement outcomes for participants.¹⁶

Public/Private Ventures’ evaluation of Communities Organizing Resources to Advance Learning (CORAL) — an after-school program aimed at improving children’s academic achievement — was designed in late 2003, just as the results of these other studies were emerging and leading to renewed interest in after-school programs. In particular, the studies were prompting interest in the quality of implementation of academic programming and its relationship to positive outcomes for children. In this context, CORAL’s evaluation offered a timely opportunity to explore the effectiveness of an after-school program that took a targeted approach to delivering quality literacy programming within a broader array of enrichment activities.

Researchers interested in after-school programs have also begun to investigate in depth the concept of engagement, along with an exploration of the importance of attendance, drawing on previous findings that suggest children’s active engagement plays a critical role in the learning that takes place in school.¹⁷ For example, children’s sense of belonging to after-school programs (whether they feel comfortable, listened to,

involved and successful) has been shown to be an important factor in whether or not they receive the full benefit of a program.¹⁸ To contribute to this ongoing investigation, the CORAL study was also designed to examine measures of participation and engagement and their relationship to outcomes.

Communities Organizing Resources to Advance Learning

This report presents findings from data collected and analyzed for the evaluation of the final two years of CORAL (during the academic years 2004–05 and 2005–06) and addresses key questions of concern for multiple constituents interested in the potential of after-school programs to promote academic benefits for participants. It does so by gathering critical information on the quality of implementation of the literacy curriculum and the level of youth’s participation and engagement in the program, along with measures of children’s performance and changes in their attitudes and behaviors over time. The report also examines the investments that were made to improve quality and attain the intended goals of the initiative.

The James Irvine Foundation designed CORAL as a five-city initiative to improve the academic achievement of academically at-risk children in some of the lowest performing schools in the state. The Foundation provided \$2 million per city for approximately the first three years of the initiative and between \$1.6 and \$1.2 million per city for each of the final three years of investment. While CORAL was funded primarily by the Foundation, several CORAL cities leveraged additional funding from other public and private sources.

Each CORAL city used Irvine funding to establish after-school programs at multiple sites, including both school-based and community-based locations, which served primarily elementary-school-age youth. Each site was overseen by a coordinator who acted for the after-school program as a principal might during the school day, providing management for site staff and daily activities. In some cities, the lead agency directly administered the programming at all sites, and CORAL staff — the site coordinators and team leaders leading the activities — were employees of that lead agency.

In the other cities, the lead agency contracted with local community-based organizations to operate some or all of the sites. Table 1 describes CORAL's structure in each city.

Originally, by design, the initiative had broad guidelines for program implementation; therefore, the approach and content of the after-school programs varied greatly across the state. While the sites typically provided youth with some mix of homework help and enrichment activities,¹⁹ in the early years of the initiative, programming ranged from primarily a science-based enrichment curriculum in one city, to mostly homework help at another, to a focus on art and cultural experiences at a third. Despite the variations in approach, however, all the CORAL leaders strove to create programs that followed basic parameters of good youth development, such as an emphasis on providing adult supports for the children and creating a safe environment where they would feel a strong sense of belonging.

The Shift to a Focus on Literacy

In 2003, at approximately the mid-point of the initiative, results from a study of CORAL's early outcomes conducted by SRI International suggested that the cities were struggling with serious implementation issues. Participant numbers fell short of agreed-upon goals, and the cost per participant was more than double what was widely considered reasonable. In addition, the study indicated that, with a few exceptions, the programming — which, aside from “homework help,” consisted almost entirely of enrichment activities — was of relatively low quality.²⁰

In response to these concerns about quality, participation and cost — and to the accumulating external evidence that after-school programming focused primarily on enrichment and homework help does not have an impact on academic achievement — The James Irvine Foundation decided to intensify CORAL's educational focus. Public/Private Ventures was asked to assist in this work and to evaluate its results.²¹

To reduce the variability among sites and increase the likelihood that the initiative as a whole would achieve its intended goals, CORAL adopted a much more targeted approach: three to four days a week of literacy activities focused on concrete strategies for helping children far behind in reading skills improve. This would take place even as programs continued to offer a variety of enrichment activities to engage these children in the after-school hours. The specific approach was “balanced literacy,” a combination of phonics instruction (focusing on the sounds and spelling of words) and whole language instruction (focusing on the meaning and messages of written words through exposure to literature). During their literacy activities, the children would listen to books being read aloud, discuss the books and the vocabulary in books, and practice phonetics, word attack skills and writing. Independently, they would read books of their choice at a level consistent with their skills and comprehension. With its sequenced literacy activities, active child involvement, focus on fostering a love of books, and explicit objectives and strategies for increasing literacy skills, this approach met the after-school program quality standard that the recent meta-analysis²² determined to be strongly associated with positive personal, social and academic outcomes for children.

In Fall 2004, all CORAL programs began integrating 60 to 90 minutes of a structured literacy curriculum three to four afternoons per week into their larger after-school activities. Literacy comprised approximately three to six hours of about 15 hours of after-school programming per week (or about 30 to 50 percent of the time). Importantly, the CORAL programs strove to implement the literacy component within the context of a youth development philosophy.

For example, to help the children stay interested and engaged, CORAL used a mixed academic/enrichment program model that included enrichment activities, physical activities, homework help and snack. And to help them develop relationships with staff, children were organized into groups, with each group having a team leader who stayed with the children through all activities and got to know them personally.

Table 1. The CORAL Cities

	FRESNO	LONG BEACH	PASADENA	SACRAMENTO	SAN JOSE
CORAL lead agency	An independent 501(c)3 formed to run CORAL	Large nonprofit organization	Large nonprofit organization	A collaboration between two nonprofit organizations, each with a history of working in different parts of the city	Large nonprofit organization
Program administration, 2005–2006	Lead agency directly oversees programming at all sites	Lead agency directly oversees programming at all sites	Lead agency contracts with local community-based organizations to operate all sites	Lead agencies directly oversee some sites; contract with local community-based organizations to operate other sites	Lead agency directly oversees programming at all sites
Start of CORAL programming	October 2002	October 2001	January 2001	January 2003	February 2003
Total number of sites, 2005–2006	11	4	4	6	8
Grade levels, 2005–2006	Elementary: 9 Middle school: 2	Elementary: 4	Elementary: 4 (one site was open to youth of all ages)	Elementary: 6	Elementary: 6 Middle school: 1 K–8: 1
Site location, 2005–2006	Schools: 11	Schools: 4	Schools: 1 Community-based organizations: 3	Schools: 6	Schools: 8

A large-scale effort, the CORAL initiative operated programs in 33 sites across the five cities and served almost 5,000 children during the 2005–2006 school year. Thirty sites were school-based; three (all in one city) were community-based.

The Evaluation

Public/Private Ventures’ evaluation of CORAL, which began in Fall 2004, was designed to serve three interrelated purposes: document the overall degree to which CORAL succeeded in achieving its key goals, provide CORAL leaders with timely feedback that would contribute to program improvement, and address questions of interest to the broader after-school field.

The over arching question guiding the research was: Does CORAL help improve the academic achievement of children in low-performing schools? To address that question and meet the other goals of the evaluation, the study questions were:

- Do CORAL sites serve children who are at risk of academic failure? Does CORAL meet the needs of its constituents, including parents, schools and children?

- Do CORAL sites provide their participants with a resource-rich after-school environment, including appropriate staffing, a breadth of activities, high-quality literacy programming, and a fun and supportive atmosphere?
- Are CORAL children actively involved? Do they participate with sufficient duration and intensity for the program to have an effect on their lives? Do they feel a sense of belonging to the program? Do they establish supportive relationships with adult staff? Do they like the activities? Why do they stop participating?
- Do CORAL participants show improvement in reading achievement and attitudes toward reading? Do they show improvement in behaviors and attitudes toward school?
- How much does it cost to run CORAL and how is the investment of resources related to quality?

Evaluation Methodology

The findings presented in this report are based on 21 months of data collection, from October 2004 to June 2006, using a variety of qualitative and quantitative research techniques (see Appendix A for more details on methodology and data collection).

To assess implementation of the balanced literacy program and understand the structure of CORAL programming, P/PV researchers conducted extensive interviews with key informants (approximately 25 CORAL staff, collaborating partners and school staff per city), focus groups with parents, and surveys of CORAL site and lead organization staff.

To understand the population of youth served, their participation and outcomes, P/PV researchers gathered school records information (on standardized test scores, English learner status and demographics) and analyzed data from each CORAL program's management information system (MIS), which tracked daily participation in various types of programming at the after-school sites.

The study also sought to address important questions about the quality of literacy activities in the after-school programs and how quality related to outcomes. In order to address these questions, the evaluation focused on a subset of four to five sites in each city and a sample of children in the third and fourth grades in Fall 2004 at each of those sites (who were then followed into the fourth and fifth grades in the second year of the study). For these intensive research sites and grade levels, P/PV conducted extensive observations of on-the-ground programming. Children completed surveys and individualized reading assessments at more than one point in time, allowing researchers to assess change.

In Spring 2006, the children's parents were also surveyed to learn more about the demographics of the children, the reasons parents enrolled their children and the perceived benefits of CORAL.

The most in-depth investigation of CORAL focused on third- to fifth-grade children for several reasons. First, there is a national call for all children to be reading at grade level by third grade²³ — while, at the same time, studies have documented that, regardless of initial reading skills, low-income children tend to fall steadily more behind in reading between first and fourth grades.²⁴ Second, because these grade levels represent a time of cognitive change among children — when they begin to compare themselves to others and better understand the differences between what they want to do well and what they are doing well — continued poor reading achievement can begin to deflate their self-confidence and their willingness to continue to try hard to learn in this and other subject areas. Third, the transition from third to fourth grade also represents a period of fundamental change in classroom practice around reading. Teachers are no longer spending as much time on the techniques of learning to read, but they are expecting children to use their reading skills to explore and understand diverse texts, including both literature and texts in other subject areas.²⁵

For children behind or even tenuously at grade level at this point, getting up to speed or keeping up with grade-level reading when this type of instruction is not offered as part of the regular curriculum becomes challenging. Programs such as CORAL may be particularly valuable in providing the extra support these children need. The challenges are potentially exacerbated in California, where class sizes increase from the mandated maximum of 20 for kindergarten to third-grade classes to, typically, more than 30, once children reach the upper grades. Finally, an examination of enrollment records prior to the launch of the initiative indicated that a large proportion of the children served by CORAL were in third to fifth grade.

The study did not gather data on comparison children. However, at the final data collection point, in Spring 2006, researchers administered surveys and reading assessments to the sample of children from the intensive research sites, as well as surveys to their parents, whether or not the children had continued to participate in CORAL. School records were also

gathered, regardless of participation status in Spring 2006. Thus, the analyses include participants exposed to the program for different lengths of time. P/PV used this approach to understand which children stopped participating in CORAL and why, and to explore the relationship of various levels of participation and engagement to outcomes.

Structure of the Report

This final report draws from two years of implementation and outcomes data to build on and expand beyond the findings of P/PV's interim report, *Launching Literacy in After-School Programs: Early Lessons from the CORAL Initiative*.²⁶ The following two chapters of this report provide background: Chapter 2 describes the population that is targeted and served by CORAL and discusses the needs and expectations of the programs' multiple constituents: schools, parents and the children themselves. Chapter 3 describes the CORAL programming and environment developed to address those needs. Chapters 4 to 6 focus on outcomes. Chapter 4 examines the literacy programming, describing the extent to which the CORAL leaders increased their ability to provide quality balanced literacy lessons on a consistent basis in the second year — as well as the steps they took to achieve quality and consistency. Chapter 5 then addresses questions related to the children's participation and engagement in CORAL, including the intensity, duration and breadth of their participation; their sense of belonging; and their reasons for leaving the program. Chapter 6 assembles findings about quality, participation and engagement and examines how those factors worked together to explain how children benefited from CORAL. Chapter 7 describes the cost to run CORAL, serve participating children and provide quality literacy programming. A final chapter highlights the key findings and briefly discusses their implications for policymakers and practitioners.

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CHAPTER 2

Who Are the CORAL Constituents?

The children who attended CORAL lived in neighborhoods with high levels of poverty and very low-performing schools — the communities targeted by the initiative since its inception. In developing the after-school programs, CORAL planners focused on the needs of these children while also addressing the interests of two other key constituents: the children’s parents and the principals and staff at the schools where CORAL sites were located.

To provide background for understanding the CORAL programming, this chapter addresses two key questions:

- What are the characteristics of the children who enrolled in CORAL?
- What did the children’s parents and schools hope the after-school program would accomplish?

With this information as background, Chapter 3 then describes the approach CORAL developed to meet these constituents’ needs and expectations.

The CORAL Children

The demographic profiles of the CORAL children reflect the challenges of the schools they attended and the neighborhoods in which they lived. Table 2 illustrates characteristics of the children enrolled in the program over the 2004–05 school year — the first year of the P/PV evaluation and the period during which literacy instruction was being integrated into the after-school day. Total CORAL enrollment statewide was 5,321, ranging from 585 to 2,081 in each of five cities. Most youth served were elementary-school aged, and they came from varied backgrounds and cultures. The highest percentage were Latino/a (about 68 percent), followed by African American and Asian American youth. Over half (53 percent) of CORAL children were designated English learners, and 89 percent, overall, were recipients of free or reduced-price lunch.

Table 2 also displays the proportion of CORAL youth who scored at each of five levels on the CST-ELA. Reflecting the struggles with reading characteristic of students in those schools and school districts, the students’ scores from Spring 2004 (prior to the implementation of literacy in the CORAL program) indicate that a significant percentage were far behind

where they should have been. Fifty percent of the children were below or far below basic proficiency in reading — the two lowest categories on the test’s scale — while only a small portion (16 percent) met or exceeded the grade-level proficiency standards.

Beyond these data on the characteristics of all children enrolled in CORAL, researchers gathered more in-depth information — based on teacher ratings,²⁹ reading assessments and surveys of the children and their parents — for a sample of CORAL children who were third and fourth graders in Fall 2004.

Table 3 displays reading-level profiles for these children, who were administered individualized reading assessments to track one measure of reading gains for the evaluation. The results indicate that more than two-thirds were not reading at grade level in Fall 2004 (approximately 70 percent scored below grade level, with 50 percent reading two or more grade levels below where they should have been). While this is a sample of the CORAL participants, it reflects the larger CORAL population served by the initiative: Half of the children in the sample were designated English learners, and one-fifth of the sample scored proficient or better on the CST-ELA.

Although the children in this sample were far behind where they should have been in reading, their attitudes and behaviors in the classroom were, on average, positive. Teachers’ assessments of these same CORAL youth indicate that, in the classroom, the children were not overly aggressive (94 percent were rated as never or rarely being so); they tended to engage in positive social relationships (41 percent sometimes/often and 58 percent very often/almost always); and they also tended to concentrate on their school work (47 percent sometimes/often and 43 percent very often/almost always).

In addition, on a survey administered when the study began in Fall 2004, these children reported that they have positive adults in their lives who care about them and are available to them for support (98 percent) and that they like school (90 percent). On a scale of one to five, they tended to report that they enjoy reading (a mean of 4.4 on a scale of 1 to 5). At the same time,

Table 2. Profiles of CORAL Youth²⁷

	FRESNO	LONG BEACH	PASADENA	SACRAMENTO	SAN JOSE	TOTAL
Total number of enrolled youth	2,081	930	585	729	996	5,321
Average number of youth per site	173	186	98	104	124	140
Gender						
<i>Girls</i>	50%	51%	53%	49%	52%*	51%
<i>Boys</i>	50%	49%	47%	51%	49%	49%
Age groups						
<i>Younger than 6</i>	3%*	9%*	13%	4%*	5%*	6%*
<i>6–7</i>	31%	37%	27%	28%	24%	30%
<i>8–9</i>	30%	39%	34%	34%	33%	33%
<i>10–11</i>	24%	16%	16%	32%	28%	24%
<i>12 or older</i>	11%	0%	10%	3%	9%	8%
Race/ethnicity²⁸						
<i>African American</i>	13%	13%	20%	32%	4%*	14%
<i>Caucasian</i>	2%	3%	3%	9%	3%	3%
<i>Latino/a</i>	71%	76%	70%	39%	70%	68%
<i>Asian</i>	11%	3%	1%	11%	18%	10%
<i>Other</i>	1%	1%	1%	3%	2%	1%
<i>Multiracial</i>	2%	4%	5%	6%	4%	4%
Designated as English Learners	57%	59%	38%	39%	68%	53%
Receive free or reduced-price lunch	97%	84%	87%	89%	75%	89%
CST-ELA Scores						
<i>Far below basic</i>	30%	12%	12%	15%	18%*	21%*
<i>Below basic</i>	34%	23%	27%	26%	23%	29%
<i>Basic</i>	28%	41%	38%	40%	43%	35%
<i>Proficient</i>	7%	17%	17%	17%	14%	13%
<i>Advanced</i>	1%	7%	6%	2%	3%	3%

*Totals do not equal 100 percent because of rounding.

Table 3. Reading Achievement Profiles of the Third- and Fourth-Grade Sample

TOTAL NUMBER OF YOUTH ASSESSED	520
Youth reading at or above grade level	30%
Youth reading below grade level	70%
Youth reading one grade below level	20%
Youth reading two or more grades below level	50%

however, they were less comfortable with their ability to do well in reading: The average for reading efficacy was 3.7 on a scale of 1 to 5. These children were just reaching an age where they were beginning to compare themselves to others, make “realistic” self-judgments about their ability, and link interest and liking to things that they are good at, making them prime candidates for an after-school program geared toward building literacy interest and skills — before efficacy and liking drop too far.

What the Stakeholders Wanted CORAL to Accomplish

The parents of youth who attended CORAL were concerned about their children’s academic struggles. In fact, most parents signed their children up for CORAL because they saw it as an opportunity for them to do better in school and get help with their homework. Approximately half of the parents also said they looked to CORAL to help improve their children’s English language skills and to help expose their children to books (see Table 4).

In many cases, these parents felt that, on their own, they were not able to provide the kind of help their children needed to succeed academically. A majority of the parents had very limited formal schooling. As Table 5 indicates, more than half (55 percent) had less than a high school education, and more than a third (37 percent) had never attended high school. For a little more than two-thirds of the sample, the primary language spoken at home was a language other than English.

The fact that the potential academic benefits of CORAL were so important to parents is consistent with other findings that parents who belong to racial and ethnic minority groups — and to a slightly lesser extent, low-income parents — are most interested in out-of-school-time programs that have at least some focus on homework help and academics.³⁰ At the same time, however, more than half (52 percent) of the CORAL parents also enrolled their children because of the opportunities for them to engage in activities that included art, music and recreation — in other words, they were interested in a variety of enrichment opportunities rather than a strictly academic program.

Like the parents, school principals and staff looked to CORAL to help children who needed to improve their academic performance. Even without targeting specific groups of students within these schools, the programs would have been likely to reach those children. However, from the beginning of the initiative, CORAL staff in all of the cities worked closely with school guidance counselors, teachers and principals to identify students who could most benefit from the program, including children who were struggling academically or socially, or who were English learners. With the new focus on literacy in 2004, two of the CORAL cities began to work with the schools to intentionally target children who were far behind in reading based on their standardized test scores. While the other three cities did not specifically target children who were below grade level in reading, they nevertheless served these children because of the overall low performance of students in the schools.

Table 4. Why Parents Enrolled Their Children in CORAL

REASON	NUMBER	PERCENT
To help child do better in school	353	71%
So that child could get help with homework	335	67%
To improve child's English language skills	260	52%
To expose child to art, music and recreation	258	52%
To expose child to books	246	49%
To help child get along better with other children	238	48%

Totals add up to more than 100 percent because respondents could mark all that apply. Results are based on a Spring 2006 survey of parents of children in the intensive study cohort: N=501.

For schools, the growing need for after-school programming that can contribute to academic benefits is due, at least in part, to pressures emanating from local school districts and state and federal education agencies to have all students meet required performance standards. Schools' intense focus on achieving measurable academic gains, coupled with cutbacks in their budgets, has afforded little or no opportunity or funding for children to participate in sports, art, music or other "fun" and enriching experiences during in-school time. Thus, like many of the parents, principals and teachers also wanted CORAL to provide the recreational and creative experiences that have been evaporating from the school day.

As one principal explained, activities that reinforced literacy learning were important, but so was "enrichment... like computers, music, art and science... Fine arts has really gone by the wayside in the everyday life of a child."

CORAL was designed to meet these multiple needs: to help boost the academic achievement of children who were struggling to learn to read, to provide them with enriching experiences that they might not otherwise have access to, and to let them have fun. The next chapter describes the CORAL program and what the children experienced during a typical day.

Table 5. Education and Language Backgrounds of CORAL Parents

	FRESNO	LONG BEACH	PASADENA	SACRAMENTO	SAN JOSE	TOTAL
Number of parent surveys completed	98	121	48	138	96	501
Highest grade completed by mother/female guardian						
<i>Less than some high school</i>	46%	42%*	37%	34%	25%	37%
<i>Some high school</i>	21%	18%	17%	14%	23%	18%
<i>High school graduate</i>	16%	19%	20%	23%	20%	20%
<i>One to 4 years of college</i>	15%	19%	22%	28%	30%	23%
<i>More than 4 years of college</i>	2%	3%	4%	1%	2%	2%
Primary language spoken in the home						
<i>English</i>	21%	33%	31%	43%	31%*	33%
<i>Spanish</i>	68%	63%	69%	37%	53%	55%
<i>Other</i>	11%	4%	0%	20%	17%	12%

The information is drawn from the Spring 2006 survey of parents.
 *Totals do not equal 100 percent because of rounding.

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CHAPTER 3

What Did the Children Experience
During the CORAL Day?

Beginning in the 2004–2005 school year, the CORAL schedules consisted primarily of literacy instruction and diverse enrichment activities, along with shorter periods of time spent on homework help, snack and recess. The programs took place for about three hours per day. In one city, the programs were open four days a week, while in the four other cities, the programs were open five days a week. These were not drop-in programs — children were expected to attend every day the CORAL programs were open.

This chapter describes the activities the children took part in when they attended CORAL, and the strategies the programs used to support and engage participating youth. The chapter begins with a description of the CORAL team leaders, the staff who worked most closely with the children and were central to their experiences.

It then addresses the following questions:

- What combination of activities was included in the CORAL programming?
- What approaches did the sites use to establish a fun, supportive environment for the children during the CORAL afternoon as a whole and, particularly, during the balanced literacy programming?

The chapter also describes specific site efforts to support and engage the large number of English learners who participated in CORAL.

The Team Leaders

The children who attended each CORAL site were divided into groups based on grade level. Each group had between 12 and 20 children who moved together from one activity to another throughout the after-school time. Each group was led by a staff member, called a team leader, who typically remained with the same group for the entire program year.

The team leaders in the CORAL initiative were young and ethnically diverse, and they frequently shared a common background, experiences and language with the CORAL children. More than three quarters (82 percent) of the team leaders were 25 years old or younger (see Table 6). Most (84 percent) reported

prior experience working with children, but fewer than half (43 percent) had previously provided literacy instruction. Many were college students. For example, of the 67 team leaders observed by researchers in 2005–2006, just under half had completed some college courses but did not have a degree. An additional 3 percent had earned a bachelor’s degree or higher; 26 percent had earned an associate’s degree; and 21 percent had completed high school but had not taken any college courses.

The team leaders’ diverse ethnic backgrounds reflected the diversity of the children, with the largest proportion of team leaders (53 percent) identifying themselves as Latino, similar to the proportion (68 percent) of children in CORAL. Moreover, to support children’s learning, more than two-thirds of the team leaders reported that they used a language other than English sometimes (49 percent) or always (19 percent) when they were with the CORAL children.

Team leaders had multiple responsibilities that directly affected the children’s experiences during the CORAL day. They planned and led literacy and enrichment activities, provided homework help and oversaw snack time, staying with their designated groups of children all afternoon as they moved from activity to activity. Beyond these responsibilities, team leaders played the central role in creating a fun, supportive and engaging environment for the children.

Providing a Combination of Activities

While CORAL was implemented in each city with slightly different activities and schedules, literacy and enrichment were fundamental at all the sites. CORAL children participated in structured literacy activities offered for three to six hours spread across three or four days each week. Cultural and academic enrichment activities — such as art, science, dance and cooking — generally lasted between 60 and 90 minutes and took place two to five days a week. Sites also offered physical education activities, occasional field trips and homework help that varied in duration from as little as five minutes a day in a few sites to up to an hour a day.

Table 6. Demographics of CORAL Team Leaders

AGE	
Less than 21 years	44%
22–25 years	38%
26–29 years	9%
30+ years	9%
RACE/ETHNICITY*	
African American	15%
Asian	17%
Caucasian	6%
Latino/a	53%
Other	10%

These data are drawn from a Spring 2005 survey of staff. Results are based on responses of 179 team leaders.

* Numbers add up to more than 100 percent because of rounding.

Balanced Literacy

The CORAL cities had two major goals for their literacy component. One was to improve participants' reading levels as measured by grades and standardized tests. A second — and to some providers, even more important — goal was to help participants develop a love of reading. The programs, in other words, wanted to develop not just “good readers” but a “culture of readers,” where children read stories for pleasure and enjoyed discussing their latest books. The two goals are not mutually exclusive — skill development and enjoyment are “mutually reinforcing.”³¹ However, for a variety of reasons, including funding cuts and a focus on test results, school-day literacy instruction often focuses on building basic reading skills, leaving little time for children to discuss or think deeply about the books they read.³² The CORAL programs hoped to fill this gap, while at the same time contributing to participants' literacy skills and achievement.

To advance these dual goals, the CORAL programs incorporated a balanced literacy model that combined phonics (focusing on the sounds and spelling of words) and whole language instruction (focusing on the meaning and messages of written words in the context of stories and other literature). The directors of all five cities' CORAL programs were given the choice

to implement one of two models (Youth Education for Tomorrow or Kidzlit) that provide activities and a structure for balanced literacy instruction.³³

Although CORAL cities had the choice of two different models, several common elements spanned all of the programs. The CORAL literacy sessions were generally scheduled for 60 to 90 minutes,³⁴ and within this time children participated in four or five distinct activities. The majority of lessons included, at a minimum, a read aloud (where staff members read books to the children, pausing for brief conversations about the book as they read) and independent reading (in which children individually read books at their personal reading levels while the instructor supervised the room and spent a few minutes talking separately with each child about what she or he was reading). Beyond these fundamental activities, the CORAL instructors also provided a mix of in-depth book discussions, writing activities and vocabulary exercises. Some lessons also included skill development activities, such as games that drilled children in particular skills like sentence construction.

In many cases, particularly early in the implementation process, team leaders deviated from this prescribed model of balanced literacy. Adding literacy activities to their programming was a challenge for many

CORAL staff who, as noted above, mostly did not have experience with literacy instruction. As a result, the exact offerings and types of activities varied from classroom to classroom as team leaders implemented those components with which they were most comfortable. Chapter 4 describes in greater detail the quality of the literacy activities and the changes in quality over the first two years of implementation.

Enrichment Activities

Unlike the literacy activities, which were based on a similar set of strategies in all CORAL sites, the enrichment offerings varied widely across the cities. Enrichment alternated between afternoons when it was provided by outside specialists (and, in one city, part-time staff hired by CORAL specifically to teach enrichment activities) and afternoons when it was led by the team leaders. The outside providers who worked with CORAL generally taught in six- to eight-week cycles, switching to a different CORAL site after each cycle. One enrichment provider, for example, taught drumming to a group of fourth-graders at one site at the beginning of the year and, after eight weeks, moved on to lead the activity at a different site within the city.

The outside providers who contracted with CORAL offered a breadth of activities, ranging from non-literacy academic enrichment, such as Young Engineers (hands-on science activities), to flamenco dancing, yoga and lacrosse. These providers generally developed lesson plans before the start of their cycle, creating curricula that allowed children to develop particular skills over the course of six or eight weeks. On the days when team leaders led enrichment, they sometimes worked from a longer curriculum focused on one theme, such as learning about and making quilts. More often, however, they provided independent activities that differed from day to day, such as leading a basketball class one day and charades the next.

Each city also offered at least some activities that offered the opportunity to further integrate literacy into the afternoon, advancing the “culture of readers” and building skills by including short stories, writing opportunities and other literacy activities in the

enrichment offerings. One team leader, for example, designed an obstacle course where some of the stations were physical obstacles and some involved solving vocabulary clues.

In all of the CORAL cities, enrichment activities were intended to serve multiple purposes. The activities satisfied the desire of many parents and principals, as well as the children themselves, for enrichment offerings that could replace the activities that have increasingly been cut from school-day instruction. And while these activities gave the children an opportunity to relax and have fun, they also often offered the opportunity for general youth development, where children could learn new skills, practice teamwork and build their self-esteem.

Creating a Fun and Supportive Environment

While including academics in after-school programming is a relatively recent development, these programs have long been regarded as opportunities for children to try out new activities, find adult role models, build confidence and have fun. The CORAL staff attempted to maintain these general principles, even as the initiative moved to an emphasis on literacy programming, by trying to infuse each activity with opportunities for fun and relationship-building. This challenge — offering academically sound activities while also supporting youth development — was one that the staff continued to struggle with, and learn new strategies for, as implementation progressed.

Having Fun in Literacy and Enrichment

One of the more obvious ways that the CORAL programs added fun to their afternoons was through enrichment activities, which often provided youth a chance to run around, get messy and be silly. Staff repeatedly noted a few activities as the children’s favorites, especially field trips to places like museums, aquariums and zoos. In some cases, creating fun activities was as simple as providing opportunities that children would not otherwise have. Staff reported that children were excited to hold drums and guitars and

CORAL in Action: An Afternoon with Fourth-Graders at a CORAL Site

Today's CORAL activity began at 2:30 p.m., as children entered the cafeteria and picked up a snack of potato chips and apple juice before sitting at tables divided by grade. The fourth-graders sat together at a table in the back where their team leader, Tina, was already set up with her materials. For about 15 minutes, the children ate, chatted with each other, and showed each other books and photos, until Tina led them to their first lesson of the day, an art enrichment activity.

This lesson was led by two artists from a local community-based organization, who taught at CORAL once a week. When the fourth-graders arrived, they sat outside at two long tables filled with materials, including clay, books, worksheets and pens. One instructor began to explain the day's lesson about making Egyptian clay slabs with symbolic drawings. After a brief explanation of the history of these items and Egyptian culture, both instructors gave some hands-on instruction on rolling out the clay and drawing symbols. For about 30 minutes, the children shaped their clay and chose symbols that represented some aspect of their personality or interests. At 3:45, other children began streaming out of their lessons to the nearby playground for recess. Some of the fourth-graders joined them, playing on the monkey bars and bouncing basketballs, while others stayed at the table to keep working on their art projects. The site coordinator walked by during this time, and the children eagerly showed him the projects they had just finished. At 4 p.m., the site coordinator blew his whistle, and all of the children lined up in front of their team leader at the playground. Tina led the fourth-graders into a classroom for the next activity: balanced literacy.

In the classroom, Tina announced that the children could sit anywhere they wanted, just for the day, and the children scattered among the six tables in the room. Tina wrote on the board, "Title: Dare to be Scared; Author: Robert D. San Souci; Theme: Scary Stories." Tina dimmed the lights, but the children begged her to turn them off completely. "I want it to be super scary!" shouted one child. Tina sat in the front of the room and began to read the story aloud, reading mostly in a calm voice but shifting to a raspy voice to emphasize the scary parts. When she finished, the children shouted, "One more chapter! I want to read another one!" Tina agreed to read them one more. When she was finished, a few children asked questions about the ending, not clear about what happened. Tina re-read the last few lines, and then one child jumped in to explain the ending.

The next exercise for the day was independent reading. Tina called the children up two tables at a time to choose books from bins. There were seven bins, each holding about 20 books that were labeled according to reading level. The books ranged from simple picture and alphabet books to large chapter books, including, for example, the Harry Potter series. The children read by themselves, many quietly whispering the words. Tina walked around the room as the children read, sometimes silently reading over their shoulders, sometimes asking a child to read aloud to her, and sometimes asking children to summarize what they had read. After about 20 minutes of reading, Tina ended literacy activities for the day at about 5:30 and led the children back to the cafeteria.

The children worked on their homework for the rest of the afternoon, mostly math worksheets, and frequently talked with each other about what the directions were and how to solve the problems. Tina sat at the head of their table, completing attendance records and generally supervising her group. By 5:45, most children had been picked up by their parents, ending CORAL for the day.

work with papier-mâché and clay at a time when many schools have eliminated music and art classes. And while literacy programming was focused on academic improvement, it also offered opportunities for youth to have fun at CORAL. In fact, for most CORAL staff, the children's active participation — when they were eagerly raising their hands, taking part in discussions and excited about a topic — was the most important measure of a literacy activity's success.

Staff did not always feel this way about literacy activities. One site coordinator described staff's reaction after learning that the program needed to include literacy:

"We were rolling our eyes and hating it. [We thought], 'This isn't the fun stuff,' but we pumped it up and made it more fun. Just... embracing the reading and realizing this can be fun. Finally thinking it really can be fun."

Early on, it was not uncommon for staff, particularly those new to literacy instruction, to equate literacy with their own memories of taking reading classes and language arts in elementary school. Some staff maintained these attitudes, leading to routine delivery of the literacy strategies and only adding fun elements during other parts of the CORAL afternoon. For the most part, however, staff came to think of literacy learning as something that could actively involve and interest children, and they developed specific strategies for creating fun within literacy activities.

One of their first steps was to choose activities and strategies that they, as instructors, found interesting. One team leader expressed a common sentiment: “First of all, I try to pick a book that I’m going to be excited about. It’s going to reflect [to the children] if I think it’s boring.” They also learned to choose books that the children would like (for example, scary stories were particularly successful) and to use strategies like using funny voices to read a story. Once in a while, they used more elaborate strategies, such as taking the children on a field trip related to a story or coming in dressed up as Medusa when reading a book about her.

A key strategy used by team leaders to make reading fun and interesting — and an approach that was implemented more consistently over the course of the two years — was to draw connections between the books and the children’s lives. Team leaders did this by asking questions, as they read a book aloud, that encouraged the children to think about their own families and experiences, or by making these kinds of connections for later discussions about the book. Other team leaders developed more hands-on “connection activities.” One instructor, for example, served the children chow mein after reading a book about a Chinese immigrant. While they ate, she led a discussion about how the Chinese food compared to the food they were used to, and how the story’s protagonist might have felt trying new food for the first time.

Developing a Supportive Environment

An important practice for helping the children enjoy and engage in the literacy activities was the development of positive relationships between children and CORAL staff — the team leaders in particular. This was often considered the foundation of the CORAL program, regardless of what specific activity was being offered. As one site coordinator said, “To me, [relationships] are the bread and butter of the program. If you don’t know your kids, you’re not doing your job.”

Staff noted that creating strong relationships was important in order to ensure that the children knew they were cared for, to help build their confidence, and to make sure they felt safe at CORAL. But good relationships were also important to the success of some activities. Team leaders explained that when they had a relationship with the children, they were able to choose activities (for example, read aloud stories) that would be interesting to them; they could connect lessons and discussions to issues in the children’s lives; and they were faced with fewer behavior problems and could handle them more quickly when they occurred.

Though staff at all CORAL sites indicated that adult-youth relationships were important to them, they varied in the extent to which they integrated specific strategies for relationship-building into their programs. A strategy common to all sites was to group one team leader with the same children for the entire afternoon, every day, as often as possible for the whole year. The team leaders worked with the same children day after day, quickly developing knowledge about them and a routine. All team leaders indicated that they took time each day to get to know their children, even if it was just casually asking how their day was or finding out their birthdays.

Some sites took this process even further, finding more ways to integrate relationship-building into the infrastructure of their programs. In one city, team leaders noted that they worked with the same youth not just for one year, but over two consecutive years, building on the relationships developed in the first year. One city implemented an activity called “on the job” or “OTJ,” in which children and team leaders had a specific time to talk about any concerns they

had — problems either with the CORAL program, in school or in their lives more generally — and, as a group, discuss how they could resolve these issues. At another site, a newly hired team leader’s primary responsibility for the first month was to simply get to know the children in her or his group, and only later turn to teaching literacy. At the end of the month, the site coordinator explained, “Our expectation is ‘I want you to tell me something special about every kid.’” This strategy was possible at this site because two team leaders were assigned to each group of youth — in part, as the site coordinator noted, so “at least there is one familiar face” for the children through staff turnover.

Four cities occasionally moved team leaders from one site to another to create an even distribution of skills and experience levels. On the one hand, this strategy disrupted the relationships that individuals had formed with children at the first site. On the other, by moving more experienced staff to new sites, CORAL programs helped newer staff learn the literacy-instruction and relationship-building skills that proved so critical to high-quality programming.

Supporting English Learners

Another part of creating a fun and supportive environment and helping all children develop a sense of belonging was understanding the needs of the English learners who made up 53 percent of CORAL participants. While the percentages varied from site to site, almost all team leaders reported working with at least some English learners, ranging from just a few children to groups where English learners were the vast majority of the children.

Many staff indicated that their primary approach to working with English learners was to help them feel comfortable and supported at CORAL, so that they would feel confident enough to participate, voice their opinions during book discussions and at other times, and build their language skills. This approach included strategies that staff used with all children, regardless of English proficiency, such as getting to know the needs and interests of individual children. Beyond that, however, staff worked to help English learners feel that their voices were valued by allowing them to speak in their native languages and encouraging bilingual

children to translate for their peers. Some sites also specifically tried to match English learners with team leaders who spoke their native languages. Indeed, as noted earlier, 68 percent of the team leaders reported using a non-English language in interactions with youth.

Team leaders used a few literacy-building approaches specifically targeted to supporting English learners, such as providing independent reading books in their native languages or finding time to work with them one-on-one in their native languages. But more often, literacy support was not targeted in this way since many of the strategies that were potentially effective for English learners reflected best practices for the academic success of all children, including asking questions and leading discussions during read alouds, using visuals or acting out the meanings of words to reinforce new vocabulary, and frequently repeating important ideas.

Strategies aimed specifically at English learners tended to be inconsistently implemented, and many team leaders indicated that they could use more ideas and training in how to work with these students. Given the many areas in which CORAL staff needed training — including each piece of literacy instruction, enrichment activities and administrative duties such as attendance procedures — specific trainings for supporting English learners often became a lower priority. Overall, however, English learners who participated in CORAL appeared to have similar outcomes as English-proficient participants, and most parents reported that CORAL helped their children improve their English skills — issues explored further in Chapter 6.

The CORAL team leaders were a diverse group reflective of the backgrounds and cultures of the children in CORAL. They brought these experiences to bear in their approaches to implementing the breadth of literacy and enrichment programming designed to engage children and provide supports for them. What was the quality of programming the children experienced at CORAL? Did CORAL’s combination of activities and team leader structure contribute to the children’s feeling of engagement in the after-school program? And, how did the children benefit? These questions are explored in the following chapters.

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CHAPTER 4

What Was the Quality
of the Literacy Programming?

Previous studies of after-school programs have suggested that disappointing outcomes (in terms of academic achievement or attitudes) may be a result of poorly implemented or limited academic programming. Understanding that quality programming was likely critical to supporting positive outcomes for children, P/PV researchers assessed quality during each year of the evaluation by systematically observing the literacy programming at intensive research sites in each of the five CORAL cities. These structured observations allowed researchers to analyze the quality and consistency of the literacy activities in which children were participating — which, in turn, enabled them to provide feedback to the CORAL leadership and, ultimately, to link quality to children’s outcomes.

Findings from the first year of this evaluation (the 2004–2005 school year) revealed that higher-quality, consistent implementation of literacy strategies was related to improved outcomes in reading for CORAL participants and, further, that a set of key program elements and strategies had contributed to sites’ achievement of higher-quality literacy programming. During the second year, the CORAL directors were in a position to apply this information and draw on the lessons of their first year experiences as they developed approaches for improving the quality of their programming. This chapter examines these efforts by exploring two central questions:

- What was the quality of the literacy programming children participated in during the second year of the evaluation?
- What steps had the CORAL city directors taken to strengthen the quality of their literacy activities during this second year of implementation?

Later, Chapter 6 describes the links between the levels of quality observed over the course of the two-year evaluation and gains in children’s reading performance.

Measuring Quality

During Year One of the evaluation, researchers had conducted observations of the literacy programming for 56 groups of third- and fourth-graders at 23 CORAL sites. In Year Two, the observations took place at 21 sites, with 43 groups of fourth- and fifth-graders.³⁵ Researchers observed most groups at three points between October and May of each year.

During these observations, researchers rated how successfully the instructor incorporated each of the six balanced literacy strategies (read alouds, independent reading, book discussions, writing, vocabulary and skill development) into her or his lessons.

Researchers also rated the extent to which instructors implemented four key classroom practices: offering positive adult support, for example, acting in a responsive way, helping and guiding children’s learning; providing high-quality instruction, for example, offering clearly presented and organized lessons and motivating and challenging youth; incorporating strong group management strategies; using successful connection-building activities, for example, relating texts to youth’s experiences.

The researchers noted whether or not each of the six balanced literacy strategies was implemented during a lesson and, if so, rated the level of its implementation on a scale from 1 to 5. Each of the four classroom practices was also rated on this scale. (See Appendix A for fuller discussion of the observations and the strategies assessed.)

These systematic observations allow us to analyze the extent to which CORAL programming successfully incorporated the central elements of balanced literacy, included high-quality instruction, and provided opportunities for youth to connect to literature and form positive relationships with adults. Importantly, these observations also allow us to measure changes in quality from Year One to Year Two.

Table 7. Average Score on Quality Dimensions for Literacy Activities

	YEAR ONE OCT 2004 TO MAY 2005		YEAR TWO OCT 2005 TO MAY 2006	
Number of groups observed	56		43	
Balanced literacy strategies (scale of 1 to 5, with 5 the highest)	Percent implemented	Average rating	Percent implemented	Average rating¹
<i>Read alouds</i>	77%	2.84	99%	3.59***
<i>Book discussions</i>	56%	2.11	94%	2.88***
<i>Writing</i>	60%	2.23	97%	3.15***
<i>Skill-development activities</i>	25%	1.52	49%	1.76+
<i>Vocabulary²</i>	NA	2.19	NA	2.62**
<i>Independent reading</i>	88%	2.81	99%	3.35***
<i>Average number of minutes children spent reading</i>	14.72 minutes		23.44 minutes***	
Classroom practices (scale of 1 to 5, with 5 the highest)				
<i>Adult support</i>	3.67		3.55	
<i>Instructional quality</i>	3.36		3.15*	
<i>Group management</i>	3.73		3.69	
<i>Connection between youth and activities</i>	2.62		3.09***	

¹ Significance levels noted in the Year Two column indicate where change from one year to the next was significantly different, based on t-test comparing Year One average rating to Year Two average rating (+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$).

² Because vocabulary development strategies could be observed during any of the other literacy strategies, it was not marked as absent or present but was only rated on the scale of 1 to 5; thus, only average ratings exist for this strategy.

Overall, the CORAL programs greatly increased the consistency and quality of their literacy activities in Year Two.

As Table 7 shows, Year Two saw marked improvements along each type of balanced literacy strategy: read alouds, book discussions, writing, skill development activities, vocabulary and independent reading. While there was improvement over the course of Year One, overall programming was inconsistent. A few skilled instructors offered all types of strategies during each lesson, but many others offered some strategies one day and different strategies another. By Year Two, however, instructors offered the four primary strategies (read alouds, book discussions, writing and independent reading) during almost all of the lessons observed. For example, read alouds were observed 77 percent of the time in Year One and 99 percent of the time in Year Two. This increased consistency was one of the most notable aspects of programming in the second year. At the same time, the quality of delivery of each strategy also improved.

Read alouds, for example, were rated 2.84 on average in Year One and 3.59 in Year Two. In other words, not only were instructors offering more strategies, they were offering higher-quality strategies.

Although consistency and quality improved significantly on the six literacy strategies, some variations remained in the other dimensions observed. One of the four classroom practices — instructional quality — was rated significantly lower in Year Two than in the previous year.³⁶ The observers rated similar levels of clarity and organization in both years, but tended to give slightly lower ratings in Year Two on how successfully the instructors challenged and motivated youth. The decline perhaps reflects instructors' attention to specific literacy activities rather than to general strategies to motivate and challenge youth. At the same time, instructors significantly increased their skill at creating connections between youth and the books they were reading, a measure of how well instructors engaged the participants by incorporating information about the children's interests, experiences or cultures into their lessons.

In order to measure overall quality of implementation of the literacy strategies for a particular group, researchers developed a literacy profile allowing the assignment of a composite score, from 1 to 5, to the literacy activities experienced by each of the 56 groups of youth observed in Year One and the 43 groups observed in Year Two. As discussed in Chapter 6, we created an “Overall Lesson Rating” in Year Two that included both literacy strategies and classroom practices.

The literacy profile considers the quality of the six balanced literacy strategies on our scale from 1 to 5, with a rating of 3 indicating “moderate quality.” It also considers frequency by taking into account whether each strategy was observed during at least half of the observations of a given group over the course of the year. A group that did not implement read alouds and independent reading — the two foundational strategies — at moderate quality at least half the time would be considered Profile 1; a group that implemented all six strategies at moderate to high quality at least half of the time would be in Profile 4 or 5.

During the first year of implementation, the majority of the groups (33 of 56, or 59 percent) were assigned to Literacy Profile 1 based on these criteria. These 33 groups did not implement moderate-quality read alouds

and independent reading during at least half of the observations. Of the remaining groups, almost all (20 of 23) fell into Profile 3, indicating that they implemented read alouds, independent reading, and one or two other strategies at least half of the time. No groups fell into Profile 4 or 5. By Year Two, the picture had changed considerably, as Table 8 illustrates. While in Year One only 36 percent of the groups were categorized as Profile 3 and no groups had been in Profile 4 or 5, by Year Two 88 percent of groups were in one of these profiles — reflecting the increase in both consistency and quality of implementation.

The literacy profile criteria represent high standards for balanced literacy programming. It is not at all surprising that, in its first year of implementing balanced literacy strategies, an after-school program would fall into Profile 1. But while the literacy programming improved significantly during the second year of its implementation, the majority of the observed groups still fell in the middle or just above the middle of the ratings scale for quality, at what is considered a moderate level. While very few groups were categorized in the lowest profile levels (suggesting that most children received at least moderate quality lessons), only a few were categorized as Profile 4 and none as Profile 5. This overall moderate quality may not be surprising, since the sites had only offered balanced literacy programming for two years.

The Literacy Profile

The overall literacy profile assigned to each group considers both the quality of balanced literacy strategies and the consistency of their implementation over the course of the year.

Literacy Profile 1: Read alouds and independent reading were implemented during fewer than half of observations, or were implemented at low quality.

Literacy Profile 2: Read alouds and independent reading were implemented at a quality rating of at least 3 (on a scale of 1 to 5) during at least half of observations.

Literacy Profile 3: Read alouds, independent reading and one other literacy strategy (writing, book discussions, skill development or vocabulary) were implemented at a quality rating of at least 3 during at least half of observations.

Literacy Profile 4: Read alouds and independent reading were implemented at a rating of at least 4, as well as all of the other four strategies at a rating of at least 3 during at least half of observations.

Literacy Profile 5: All six balanced literacy strategies were implemented at a rating of 4 during at least half of observations.

And as described in Chapter 6, the rapid improvement to even this level of quality seems to have had implications for the benefits children gained from the program.

Improving Programming

The improvements in CORAL’s literacy programming did not happen all by themselves. During the 2005–2006 school year, CORAL staff focused very deliberately on strengthening the quality of the literacy activities. The staff had a year of their own implementation experiences to learn from and build on. In addition, the evaluation findings from the previous year had shown not only that children in the moderate-quality groups had better reading gains than those in low-quality groups; they also pointed to specific practices that seemed to contribute to higher-quality activities. CORAL staff were able to use these findings to bolster the quality of their programming.

The CORAL cities that were most successful in improving the quality of their literacy programming shared several common features.

From the information gathered during interviews with program staff and partner agencies, researchers were able to identify several specific strategies that helped explain how CORAL staff were able to improve the quality of their literacy programming in Year Two. Described in the following pages, these

strategies included: having an effective literacy director; developing an integrated approach for providing monitoring, coaching and training; and investing resources in strengthening the independent reading component of the balanced literacy lessons.³⁷

A Strong Role for the Literacy Director: By the end of the 2004–2005 school year, it was clear from the experiences within CORAL cities and the first-year evaluation results that the role of a literacy director was a key determinant in implementing the literacy programming quickly and at a moderate level of quality. This role included providing initial and ongoing staff training on successful strategies for delivering the literacy activities, regular monitoring of on-the-ground programming, as well as coaching to help support the team leaders and site coordinators.

While only two of the five cities began Year One with a literacy director in place, all cities had them in place by the end of that year (in one large site, a team of four people filled this role). At the start of Year Two, the literacy director in each city was ready to guide and oversee successful implementation. Literacy directors were able to do their jobs more effectively in this second year because their roles had been more clearly defined, and they had developed relationships with the team leaders and established a degree of credibility in each city.

Table 8. Literacy Profiles for Observed Groups Year One and Year Two

Number of Groups Observed	YEAR ONE OCT 2004 TO MAY 2005		YEAR TWO OCT 2005 TO MAY 2006	
	Number of groups	Percent of groups	Number of groups	Percent of groups
Literacy Profiles				
Profile 1	33	59%	5	12%
Profile 2	3	5%	0	0%
Profile 3	20	36%	31	72%
Profile 4	0	0%	7	16%
Profile 5	0	0%	0	0%

An Ongoing, Integrated Approach to Strengthening Quality: With literacy directors in place before the 2005–2006 school year began, a coordinated process of providing professional development for team leaders and site coordinators could be implemented — and was, to a degree, in all cities. The process at its most successful involved initial targeted trainings in the literacy strategies, ongoing monitoring of the quality of those strategies as they were implemented, coupled with one-on-one coaching of the team leaders to address areas needing improvement and utilization of data to identify topics for training sessions scheduled regularly throughout the program year.

One of the major differences going into Year Two was that the literacy directors and CORAL city directors (and, in many cases, site coordinators) had a much clearer idea of what quality literacy programming looked like on the ground. This directly enhanced their ability to provide more targeted and structured training for the team leaders prior to Year Two startup. Because many team leaders had experienced the previous year’s literacy programming, their insights and help with developing trainings were also a valuable addition in Year Two.

In order to reduce redundancies and encourage professional development, one city reformulated its entire method of offering training. Team leaders were grouped according to their experience, skill and previous trainings attended, and each group received targeted trainings that built on team leaders’ previous knowledge and exposed them to new skills. Staff in this city were among the most satisfied with their training and support and were responsible for some of the highest-quality activities observed.

Monitoring and coaching were also strengthened during Year Two, with both literacy directors and site coordinators engaged in observing the team leaders on an ongoing and regular basis and providing feedback on their strengths and areas in need of improvement (both short- and long-term).

Prior to the start of the second year of programming studied, literacy directors were encouraged to create their own forms for observing program quality. These observation forms became an important tool for collecting consistent data across the sites in each city, helping literacy directors identify areas of strength and places where more targeted or specialized training might be needed to improve the quality of the literacy activities.

Books and Time for Independent Reading: The first-year evaluation had highlighted the positive relationship between independent reading time — time during each day’s literacy programming for children to select and read books of interest to them — and children’s reading gains. In light of this finding, all CORAL city directors became more careful about allocating sufficient time for independent reading (typically 20 to 30 minutes of each day’s literacy programming) and providing better-targeted training for team leaders so they could implement this activity more effectively. The new trainings typically offered suggestions that helped team leaders guide children in the selection of books at appropriate reading levels, manage the group during the period that children were selecting books (so as not to spend too much time on this task), design focus questions for children to think about (for potential discussion later) as they read their books, and develop strategies for providing one-on-one support to the children during independent reading time.

The CORAL directors also increasingly recognized the importance of having large numbers of books that would interest the children and improve their literacy skills. In every city, staff noted the increased numbers of books available in Year Two and additional strategies for keeping the books “fresh” for children. The cities increased the numbers of books in three primary ways: purchasing more books, generating book donations and utilizing books from the public and school libraries. To stretch the available variety of books, three cities rotated their baskets of books among sites, either monthly or once mid-way through the school year.

With the great variety of reading levels, there was an increased emphasis in Year Two on making sure that the sites had enough pre-K books as well as chapter books of high interest to the children. While cities increased the numbers of books for lower-level readings from Year One to Year Two, staff voiced a need for continued attention to the challenge of having a great enough variety of books at the lowest reading levels to prevent children from becoming bored.

This chapter has described the significant improvement in the quality of the literacy programming over the course of a two-year evaluation of CORAL and the factors that contributed to the increased level of quality. The next chapter provides an examination of the extent to which the children participated over time and were actively engaged in CORAL — factors that prior research has identified as important for program effectiveness.

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CHAPTER 5

To What Extent Were Children
Participating and Engaged in CORAL?

Research on after-school programs has begun to explore multiple facets of participation (e.g., intensity, duration and breadth of exposure to a program) and engagement (e.g., the extent to which children are involved in the program and how they feel about being there) as factors critical for understanding whether and how children benefit.³⁸ Previous research suggests, for example, that where programs have had measurable impact on students’ academic achievement, children have attended these programs on a regular basis over time, sometimes even over a number of years.³⁹ More recent research exploring both participation and engagement draws directly from studies of in-school learning, and posits that while attendance is important, it is not, in itself, enough for children simply to attend — they must also be actively engaged in the after-school program.⁴⁰ Both factors were explored in this study.

In order to provide a picture of children’s participation and engagement, this chapter addresses the following questions:

- How frequently did the children attend CORAL?
- To what extent did they participate in the entire range of literacy and enrichment activities offered by CORAL programs?
- For how many semesters did they remain in CORAL?
- Did the children like the CORAL activities?
- Did the programs’ staff establish supportive relationships with the children?
- Did the children feel safe and have a sense of belonging in CORAL?
- What were the major reasons children dropped out of the after-school program?

The chapter describes high rates of participation and engagement for all CORAL participants.

Attendance at CORAL

The CORAL initiative consisted of structured programs that participants were expected to attend for the full afternoon every day the programs were open. Staff in all five cities developed attendance policies that reflected these expectations. When parents signed their children up for CORAL, the staff made clear that children who were frequently absent would be asked to leave the program. It was staff policy to call parents if a child was absent — both to reiterate the importance of consistent attendance and to let families know that staff cared about the children. CORAL staff were generally understanding if parents explained that a child was absent for a specific reason, such as illness or a family obligation, but occasionally asked parents to pull their children from the program after repeated absences.

Table 9. CORAL Attendance in 2005–2006

	FRESNO	LONG BEACH	PASADENA	SACRAMENTO	SAN JOSE	TOTAL AVERAGE
Average Number of Days Open	176	190	140	135	128	151
Average Days Youth Attended	129.8	128.8	85.8	103.0	83.1	110.3
Average Attendance Rate <i>(days attended out of days programs were open)</i>	73.8%	67.8%	61.3%	76.3%	64.9%	73.0%
Average Days per Week Attended	3.3	3.7	2.1	2.9	2.3	3.0
Average Hours per Day Attended	3.2	3.3	2.8	2.8	3.1	3.1
Percent of Youth Who Attended fewer than two Days per Week	4.3%	1.8%	51.5%	5.3%	25.7%	11.9%
Percent of Youth Who Attended three or More Days per Week	81.4%	92.7%	18.2%	50.5%	10.0%	58.2%
Average Days of Literacy Attended per Week	2.9	2.2	1.8	2.5	2.2	2.3

Data are drawn from August 15, 2005 through June 30, 2006. These numbers represent the sample of children (N=378) at the 21 sites followed most closely in the study.

Children attended CORAL on a regular basis, and at rates that appear particularly strong compared to findings from some other after-school programs.

During the 2005–2006 school year, the CORAL programs were open an average of 151 days. Out of these total possible days, the children in the research sample attended CORAL an average of 110.3 days during the year (an overall average attendance rate of 73 percent), or an average of 3.0 days per week (see Table 9). More than half of the enrolled children (58.2 percent) attended CORAL three or more days per week, and 69.3 percent attended more than 75 days during the year. These rates appear particularly strong compared to some other studies of after-school programs. A first-year evaluation of the 21st Century Community Learning Centers, for example, found that children attended an average of 58.3 days over the year, and only 16.9 percent attended more than 75 days of programming.⁴¹ A meta-analysis of 73 after-school programs⁴² found 11 programs with youth attendance ranging from 15 percent to 26 percent of the days the programs were open and an additional three programs with attendance ranging between 26 and 50 percent.⁴³ Attendance data were not available for the remaining programs.

While children across the five CORAL cities attended literacy activities most frequently, they also participated in homework help and non-academic enrichment activities on a regular basis.

The CORAL after-school programs provided a range of activities during the course of any individual week and across the entire school year. As Table 10 illustrates, overall, children attended literacy the most frequently of any activity (an average of 85.7 days) during the 2005–2006 school year. On average, they participated in homework help nearly as often (81.4 days); but in three of the cities, they participated in this activity even more frequently than in the literacy programming.⁴⁴ Children also regularly attended non-academic enrichment activities (for example, arts, dance, music, drama) and physical education, but did so with greater variation across the state, reflecting cities' varying schedules in these areas. These data reveal that the programs were relatively successful at exposing youth to a variety of activities, striking the balance they had hoped to achieve between academics and enrichment and meeting the interests of parents, school staff and the children in such a balance.

Table 10. Attendance by Type of Activity: Average Number of Days

	FRESNO	LONG BEACH	PASADENA	SACRAMENTO	SAN JOSE	TOTAL AVERAGE
Average Number of Days Open	176	190	140	135	128	151
Average Number of Days Literacy Programming Offered	167	147	116	125	127	136
Average Number of Days Attended						
<i>Literacy</i>	112.1	76.1	71.5	85.9	80.6	85.7
<i>Other academic</i>	6.3	22.2	1.5	3.3	2	9
<i>Homework help</i>	103.2	99.2	75.4	90.2	22.7	81.4
<i>Non-academic enrichment</i>	62.5	47.5	36.9	45.9	70.7	53.2
<i>Field trips</i>	3.1	19.8	0.2	7.7	6.6	7.3
<i>Physical education</i>	71.6	69.3	9.8	24.5	14.9	43.2

Data are drawn from August 15, 2005 through June 30, 2006. These numbers represent 21 sites and a sample of 378 fourth- and fifth-grade children followed most closely in the study.

Retention Over Two Years

While the frequency of attendance over the course of an academic year is important, some studies have suggested that youth may need to attend a program over multiple years to reap measurable gains.⁴⁵ This section, therefore, examines retention rates in terms of the number of semesters children stayed in CORAL over the two-year evaluation period. It also provides parents' perspectives on reasons their children stopped attending.

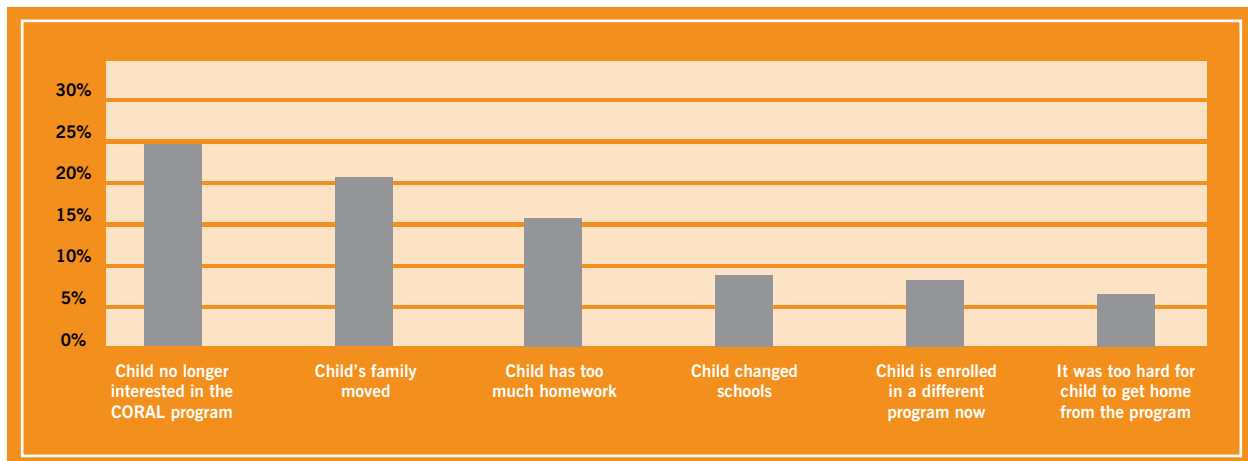
More than two-thirds of the children participated in CORAL during both years of the evaluation.

Of the children in the sample who attended CORAL in 2004–2005, 69 percent of those eligible⁴⁶ continued to attend in 2005–2006. In addition, 63 percent attended all four semesters of the period during which data were being collected, while only 2 percent of the children attended CORAL for just one semester. These retention rates were similar for all youth in the sample, regardless of their demographic characteristics (gender or ethnicity), their Fall 2004 grade-level reading performance, their English learner status, or their Fall 2004 ratings of their attitudes toward school and reading.⁴⁷

To learn more about why children stopped going to CORAL, researchers asked parents (in a late Spring 2006 survey) to identify the primary reasons their children had stopped attending. As Figure 1 illustrates, parents' most frequent response (25 percent) was that their children were no longer interested in the program. Other reasons they cited, however, were external to whether the children liked or were interested in the program: For example, parents said their children had left CORAL because the family moved (21 percent) or the children changed schools (9 percent). The other most frequently noted reason for leaving the program was that the children had too much homework (16 percent).

While 25 percent of parents whose child no longer attended CORAL reported that their children had left the program because they were no longer interested in it, a large proportion of children (including those who no longer participated) reported liking the CORAL activities and finding CORAL a safe and supportive environment. The following section describes these and other aspects of children's engagement in the after-school program.

Figure 1. Reasons Children Left CORAL



Of the 501 parents who completed the survey in late Spring 2006, 207 indicated that their children no longer participated in CORAL. These responses are based on surveys from those 207 parents.⁴⁸

Active Engagement

Chapter 3 described the strategies that the CORAL programs and staff — and the team leaders, in particular — used to build strong adult-youth relationships and create an environment that was both supportive and fun for the children. Following is more specific data, from the participants' perspectives, on the extent to which the CORAL programs were able to successfully accomplish these objectives. Data for this section are drawn from a Spring 2006 survey completed by 378 children (all fourth- and fifth-graders when the survey was administered). Children were asked to complete the survey whether or not they continued to participate in CORAL.

Most children reported liking the range of CORAL activities and found them interesting and challenging.

While the CORAL sites emphasized literacy, they all provided a range of activities intended to engage youth in the after-school programming. According to the Spring 2006 survey, 72 percent of children reported that they liked the CORAL literacy activities (see Figure 2), which is particularly noteworthy considering that the program included large numbers of children

who struggled with reading and academics. At the same time, a higher proportion of children reported liking the other activities offered. The highest percentage of children reported enjoying the sports (94 percent) and arts activities (92 percent). When asked about CORAL overall, 73 percent agreed that all of the program's activities were interesting and challenging.

The CORAL programs established positive adult-youth relationships.

Judging by the survey of fourth- and fifth-graders, positive adult-youth relationships appear to be one of the strengths of the CORAL program. Almost all children (97 percent) reported that there was at least one supportive adult at CORAL (someone whom they felt they could talk to or go to if they needed help), and 73 percent indicated that there were two or more such supportive adults (see Table 11). When asked specifically about the staff who led the literacy activities (a key role of the team leaders, as described in Chapter 3), more than 85 percent of children agreed that the staff paid attention to and cared about them.

Table 11. Participants' Feelings of Support, Safety and Belonging at CORAL

Respondents who agreed that:	Percent
There is at least one supportive adult at CORAL	97%
There are two or more supportive adults at CORAL	73%
They feel safe at CORAL	90%
They feel a sense of belonging to CORAL	71%
They have positive relationships with their CORAL peers	80%
When asked specifically about their literacy activities at CORAL, respondents who agreed that:	
CORAL staff pay attention to and care about them	85%
CORAL staff explain things clearly	83%

Each of the topics in this table is derived from sets of individual questions combined to form a scale. Examples of specific items that comprise each scale are presented in Appendix A.

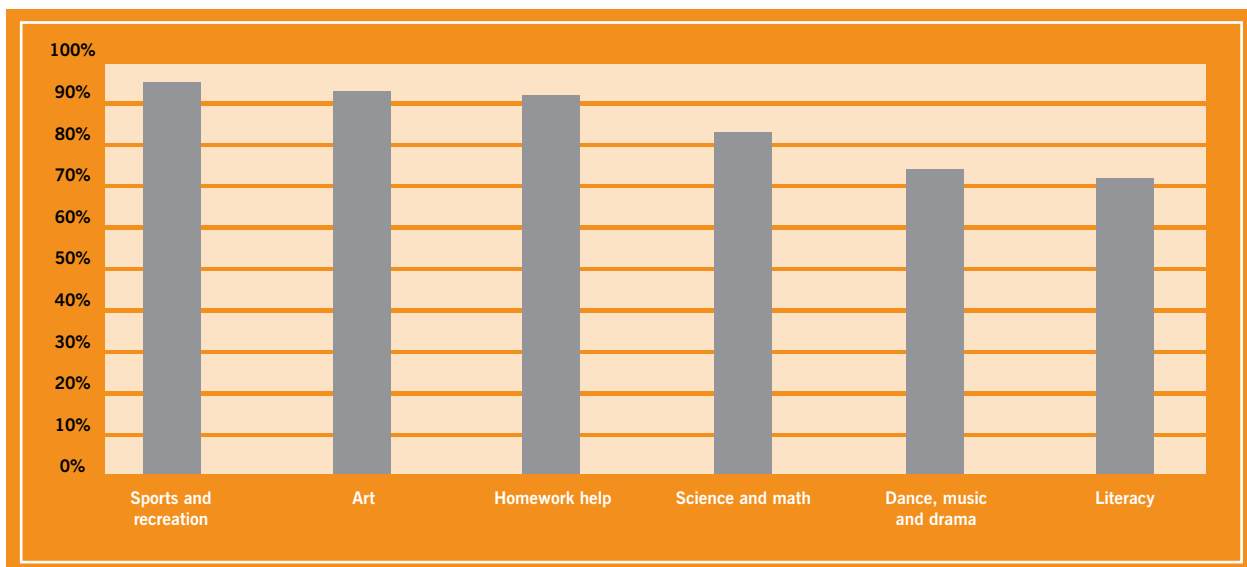
The programs created an environment where children felt safe and had a strong sense of belonging.

As Table 11 also describes, CORAL seemed to provide a safe space where children felt comfortable and cared for. Overall, 90 percent of children indicated that they felt safe at CORAL, and 80 percent reported that their relationships with their peers at CORAL were positive (in other words, they liked the other children and knew them well, and their friends were also involved in CORAL). Almost three-quarters of the children (71 percent) agreed that they felt a sense of belonging to CORAL (in other words, they felt that they mattered while at CORAL, that CORAL was a comfortable place to spend time, and that they were involved and successful while at CORAL).

For all of these measures — the children’s ratings of the CORAL activities (illustrated in Figure 2) and their feelings of support, safety and belonging at CORAL (illustrated in Table 11) — the responses of English learners and English-proficient children differed in only one area: English learners were significantly more likely to agree that the CORAL activities were interesting (77 percent of English learners agreed compared to 66 percent of English-proficient children). These findings suggest that the strategies (described in Chapter 3) the cities used to create supportive and engaging environments for all children — along with some strategies particularly focused on English learners — were successful.

The following chapter explores the outcomes for children who participated in CORAL.

Figure 2: Children’s Rating of How Much They Liked Various CORAL Activities



Responses are based on the Spring 2006 survey of 378 fourth- and fifth-grade children, including current participants and children who no longer attended.

CHAPTER 6

How Did CORAL Participants Benefit?

As the preceding chapters have described, the CORAL program is on its way to achieving key programmatic benchmarks associated with positive outcomes for participants. By Year Two of the evaluation almost all of the instructors of the groups observed were consistently utilizing the balanced literacy strategies and doing so with at least a moderate degree of quality — a factor that Year One findings suggested was related to better grade-level reading gains. And the vast majority of CORAL children reported being engaged in the program — that is, they liked the activities at CORAL, including the literacy activities, and felt a strong sense of belonging. The children also reported receiving positive developmental supports from the program, in the form of a safe place to be and the availability of supportive adults. CORAL programs involved children at relatively high levels of intensity and duration, as documented by the rates of participation and retention over the two-year study period.

That CORAL participants stayed in the program over time, felt a strong sense of belonging to the program and liked it, and were exposed to literacy activities that meet criteria for high-quality implementation leads one to anticipate that these children gained some benefits from the program. This chapter explores the role of quality, participation and belonging in promoting positive outcomes for the children involved in CORAL. It first describes the outcomes measured and then addresses the following questions:

- How do children’s reading performance, attitudes toward reading, as well as attitudes and behaviors in school change over time?
- Do certain program factors — such as the quality of implementation — help explain how well children do over time?
- Are children’s levels of attendance and engagement in the program related to their outcomes?
- Do some children benefit more than others, based on factors such as English learner status or how far behind they were in reading when enrolled in CORAL?

The chapter also briefly discusses parents’ and school staff’s perceptions of how the children benefited from CORAL.

The study does not include a comparison group; therefore, it is not possible to determine the degree to which unknown, unmeasured factors may have also contributed to the children’s outcomes. For example, where positive outcomes relate to children’s sense of engagement in CORAL, it is impossible to determine conclusively that the program made the difference because the same characteristics that contributed to children’s feeling of engagement in the after-school program also may have contributed to their positive outcomes. Also, in some instances, an outcome may decline over time — which could be interpreted as a negative finding, but may, in fact, be positive if children who never enrolled in CORAL experience a more precipitous decline.

Despite these limitations, the accumulation of information in this chapter suggests that higher quality programming and children’s positive engagement in CORAL helped to support positive outcomes for children. (See Appendix A for details on the data collection strategies and measures and Appendix C for details on the analyses described in this chapter.)

Outcomes Assessed

The CORAL initiative was created with the goal of helping to improve academic achievement for children in low-performing schools. Thus, the outcomes examined for the evaluation were focused on these areas and included reading performance, attitudes toward reading, as well as attitudes and behaviors in school.

Reading Performance

Both individual reading assessments and standardized test scores were used to assess gains in reading. As part of the evaluation, P/PV researchers administered the Jerry L. Johns Basic Reading Inventory and assigned a grade-level equivalent score based on this individual assessment. The grade-level equivalent score takes into

account how well children perform in reading a series of graded word lists and graded paragraphs, as well as their responses to comprehension questions after each paragraph. Reading levels were assessed in the Fall and Spring of each school year included in the evaluation (Fall 2004, Spring 2005, Fall 2005 and Spring 2006).

P/PV also gathered the CORAL children's test scores on the CST-ELA from school district records. Based on how well they perform on the test, children receive a proficiency score indicating whether they are "far below basic," "below basic," "basic," "proficient" or "advanced" for their grade level in reading.⁴⁹ Tests are administered in groups within the school-day classroom, typically toward the end of each school year. Spring 2004 (before the launch of the literacy component of the initiative), Spring 2005 and Spring 2006 test scores were gathered from the school districts for children enrolled in the study over the course of the two-year evaluation.⁵⁰

The individual reading assessments provide an estimate of the grade level at which children are reading with fluency and comprehension. Thus, gains in scores on the Informal Reading Inventory indicate grade-level gains in reading (for example, moving from a first-grade reading level to a second-grade reading level would show a gain of one grade-level in reading). Because the CST-ELA is a proficiency test, it cannot be used to look at absolute gains from one year to the next in the same way possible using the Informal Reading Inventory (see Appendix A). On the CST-ELA staying in the same category from one year to the next (for example, being proficient at third-grade standards in third grade and then proficient at fourth-grade standards in fourth grade) can be interpreted as positive, even though the student's "score" remains the same. In contrast, staying far below basic would not be a positive outcome.

To capture whether the children had positive outcomes from one year to the next and to test the links between program quality, participation and engagement to positive outcomes, we needed to define what that positive outcome would look like. We used a definition that was constructed to mirror the California

Department of Education proposed guidelines for Proposition 49 grantees that were considering test scores as one of their outcome areas.⁵¹ Children were identified as having a positive outcome on the CST-ELA if, from one year to the next, they:

- Moved from "far below" or "below basic" up a level, or
- Stayed in the range of "basic" or above ("proficient" or "advanced")

This result was constructed as a "yes" or "no" variable to describe a positive outcome from the 2004 to 2005 CST, from the 2005 to 2006 CST and from the 2004 to 2006 CST.

Attitudes and Behaviors

In Fall 2004 and Spring 2006, children completed surveys assessing their attitudes toward reading as well as their attitudes and behaviors in school. More specifically, the study focused on a set of 13 outcomes from the survey. Those specific to reading included children's sense of comfort with their ability to read (their reading efficacy), liking reading, time spent reading after school and in the past four weeks, and talking with an adult about something they had read. Outcomes related to school more generally included liking school, coming to school without homework done, wanting to go to school, studying hard for a test, missing a day of school and getting in trouble at school.

Other Benefits

During visits to the CORAL program sites, researchers conducted focus groups with parents and interviews with principals, teachers and initiative stakeholders on the ways in which they witnessed CORAL participants benefiting. In addition, parents completed Spring 2006 surveys asking about the extent to which the CORAL program benefited their children across multiple domains. As was true for the other Spring 2006 measures — including CST scores, individual reading assessments and youth surveys — this parent survey was obtained whether or not the children were still attending the after-school program.

Overall Changes on Outcome Measures

The first step in the analysis was to examine whether children's reading performance or attitudes toward reading and school changed between Fall 2004 and Spring 2006. While not providing evidence of program effectiveness, these findings provide an indication of the pattern of change for CORAL children overall, regardless of the duration of their participation, their sense of belonging or the quality of the programming to which they were exposed. They provide a context for other findings discussed in the later sections of this chapter.

Children participating in CORAL showed improvement in their grade-level reading performance and positive outcomes on CST-ELA test scores over the course of the evaluation period.

Small but significant gains, based on the individual reading assessments, were found in children's grade-level reading scores over the course of each school year (with an average of about five months between assessments). Children gained an average of .31 grade levels in reading from Fall 2004 to Spring 2005 and an average of .44 grade levels from Fall 2005 to Spring 2006. The proportion of children deemed to have a positive outcome on their CST-ELA (as defined in this chapter) was 68 percent from Spring 2004 to Spring 2005 and 72 percent from Spring 2005 to Spring 2006.

Children's attitudes toward reading and school remained relatively stable between Fall 2004 and Spring 2006.

Table 12 displays the averages for each of the 13 school and reading attitudes measured in Fall 2004 and again in Spring 2006. Analyses comparing children's reports at these two points in time revealed that children's attitudes and behaviors stayed relatively steady, although four of the 13 survey outcomes measured showed significant declines. By Spring 2006, children's ratings of how much they liked reading and liked school and of how often they missed or cut school were lower, on average. And their ratings of how often they had gotten in trouble at school were higher.⁵²

The analyses also tested for whether the change was different for children who moved from third grade in Year One of the evaluation to fourth grade in Year Two compared to those who went from fourth to fifth grade during the same years. The patterns were similar for both groups on all but two measures — “studied hard for a test” and “wanted to go to school” — where children moving from third to fourth grades showed a decline and children moving from fourth to fifth grades showed an increase.

Although these analyses indicate little change over time for CORAL participants, it is difficult to characterize the findings without a comparison group. In general, youth's attitudes toward school and reading tend to decline over this phase of elementary school,⁵³ so the fact that they report little change may be a relatively positive finding.

It is important to note that these overall analyses do not consider characteristics that might contribute to explaining program effectiveness, such as a child's English learner status or how far behind in reading she or he was at the time of the first assessment. The analyses also do not take into account the quality of the program to which individual children were exposed or the level of their participation or engagement in the program. The following three sections explore how these factors might help explain the changes in outcomes.

Table 12. Children's Ratings of School and Reading, Fall 2004 and Spring 2006

(all outcomes rated from 1 = low to 5 = high unless another range is specified)

	AVERAGE FALL 2004	AVERAGE SPRING 2006	MEAN CHANGE
Attitudes and Behaviors in School			
<i>Pay attention and concentrate in class</i>	4.4	4.3	-0.1
<i>Like school</i>	4.4	4.2	-0.2***
<i>Come to class without finishing homework</i>	1.9	1.8	-0.1
<i>Felt unsafe at school in the last 30 days</i>	2.1	1.9	-0.2
<i>Studied hard for a test in the last 30 days</i>	4.2	4.2	0
<i>Got in trouble at school in the last 30 days</i>	1.8	1.9	.1+
<i>Missed/cut whole day of school in the last 30 days</i>	1.4	1.3	-.1+
<i>Wanted to go to school in the last 30 days</i>	4.4	4.4	0
Attitudes Toward Reading			
<i>Like reading</i>	4.4	4.3	-0.1*
<i>Talked with someone about something read in the last four weeks</i>	3.6	3.5	-0.1
<i>Amount typically read for pleasure after school (1 = no time to 4 = more than an hour)</i>	2.9	2.8	-0.1
<i>Amount read books for pleasure in the last four weeks</i>	3.2	3.4	.2
<i>Comfort with ability to read (reading efficacy)</i>	3.7	3.7	0

Change is assessed for approximately 305 children for whom Fall 2004 and Spring 2006 surveys, enrollment and attendance data, and English learner status were available. +p<.10, *p<.05,** p<.01,***p<.001

Quality and Reading Performance

Prior studies of after-school programs that have found little or no effects on academic achievement have also found that implementation of the program components designed to help improve academic performance was poor or uneven. For this reason, the CORAL evaluation was designed to test whether the literacy programming achieved quality and if, in turn, that quality was related to stronger outcomes for children.

As described in Chapter 4, researchers observed the literacy activities and noted the quality of the literacy strategies utilized (read alouds, independent reading, book discussions, writing, vocabulary and skill development activities), along with other more general classroom practices (such as adult support, instructional quality, group management and connection making). Having these observation data from each program year permits analyses linking the quality of literacy programming to changes in children's reading performance over the same timeframe.

In examining the relationship between quality and reading performance over Year One, the literacy quality ratings (the literacy profile defined in Chapter 4) and the classroom practices ratings are used separately. During the first year of balanced literacy programming implementation, there was little interrelationship between these two sets of ratings. Instructors in some groups may have been skilled at group management practices and offering strong adult support, but inconsistent in their inclusion of key literacy strategies in the lessons (for example, only occasionally having the children read independently). Other instructors may have consistently included the key literacy strategies in their lessons but presented the lessons at a relatively weak level of instructional quality or omitted the kinds of connection-making activities that could engage the children in books and learning.

In Year Two, program practices had improved significantly across the CORAL cities (as discussed in Chapter 4). The groups varied little on the literacy profile, and the ratings of classroom practices were highly interrelated with those of the literacy strategies. In order to make distinctions among levels of quality in the observed groups and analyze the link between quality and reading performance, we constructed an Overall Lesson Rating. This rating comprises the average ratings of the four main literacy strategies (read alouds, book discussions, writing and independent reading) and the average ratings of the four classroom practices.

The next sections examine how quality was related to gains on the Informal Reading Inventory and to a positive outcome on the CST-ELA.⁵⁴

More consistent and higher-quality implementation of the literacy strategies was related to reading-level gains.

In Year One of the evaluation, children in groups that received more consistent and higher-quality implementation of the literacy strategies (those in Profile 3 — the highest profile any groups achieved in Year One) exhibited greater reading-level gains over the school year compared to children participating in groups where the literacy strategies were not consistently implemented (those in Profile 1).⁵⁵ As displayed in Table 13, average reading gains were .26 grade levels for children in the lowest-quality group (Profile 1), but they were .45 for children in groups

where the literacy activities were implemented at a moderate level of quality (Profile 3). Additional Year One analyses found no relationship between observed quality of the general classroom practices — adult support, instructional quality, group management, and connection making — and children’s reading-level gains.

In Year Two, almost all groups (88 percent) displayed consistent and higher-quality implementation of the literacy strategies (achieving Profile 3 or 4, as described in Chapter 4), making comparisons inappropriate due to the very small number of children in the lower-quality (Profile 1 and 2) groups. The average reading gain of .44 grade level over the second school year was comparable to the Year One average gain of .45 for children exposed to higher-quality literacy activities. While not conclusive, these findings support the theory that youth’s exposure to more consistent and higher-quality implementation of the literacy components leads to greater gains.

The combination of more consistent and higher-quality implementation of the literacy strategies and stronger classroom practices was associated with a greater likelihood of having a positive outcome on the CST-ELA test.

In Year One, ratings of the quality of the literacy strategies and of the classroom practices were not associated with outcomes on the CST-ELA. In Year Two, however, when the quality of the literacy strategies had improved markedly, a significant positive relationship was found to exist between the Overall

Table 13. Literacy Profiles and Average Change in Reading Level Across Two Years of Evaluation

LITERACY PROFILE*	NUMBER OF GROUPS	NUMBER OF YOUTH	AVERAGE CHANGE IN READING LEVEL
All Groups 2005–2006	42	368	0.44
All Groups 2004–2005	56	381	0.31
Profile 1	33	246	0.26
Profile 2	3	28	0.28
Profile 3	20	107	0.45

* During Year Two of the evaluation, too few youth were involved in Profiles 1, 2 or 4 to make meaningful comparisons, so they are grouped together in the table. During Year One of the evaluation, no groups were at the level of Profile 4 or 5.

Lesson Rating — a composite rating that included the literacy strategies and the classroom practices — and the likelihood of children having a positive outcome from 2005 to 2006 on the CST-ELA. Based on a rating scale of 1 to 5, the scores across all observed groups ranged from a low of 2 to a high of 4.29, with half of the groups scoring 3.48 or better. This positive association indicates that children in groups with higher Overall Lesson Ratings were more likely to have a positive outcome on the CST than those in groups with lower Overall Lesson Ratings.

To provide an example of this relationship between Overall Lesson Rating and the likelihood of a positive outcome on the CST-ELA, the percentages of children in groups scoring above the median (3.48) on the Overall Lesson Rating who showed positive outcomes on their CST-ELA from 2005 to 2006 were calculated and compared to those in groups scoring below the midpoint. As Table 14 shows, 67 percent of the children in the lower-rated groups had a positive outcome on their CST-ELA from 2005 to 2006, compared to 75 percent of the children in the higher-rated groups.

While more successful implementation of the literacy strategies appears to support gains in grade-level reading, this successful implementation is not enough, in and of itself, to support positive outcomes on the CST. It was only in the second year of the initiative’s literacy programming implementation, when the consistency and quality of literacy strategies were stronger and much less variable, that the literacy strategies — when coupled with strong classroom practices — were related to positive CST-ELA outcomes for children in those groups.

It is important to note that collection of the evaluation data concluded after only the second year of implementation of the literacy strategies. Programs continued to strengthen practices — such as training and coaching the instructors — that contribute to higher-quality lessons. Although the literacy programming grew and matured over the two years of the evaluation, there was still room for improvement. Only 16 percent (or 7 out of 43) of the groups observed in Year Two achieved a Profile 4 in spite of the training, monitoring and coaching the instructors received. As a result, this number of groups was not enough to test whether an increase in quality of this level might contribute to greater gains in reading performance by the children in those groups.

Participation, Engagement and Outcomes

A recent publication on youth engagement in after-school programs describes research suggesting that all of the following factors affect outcomes: the reason(s) children enroll in a program, the length of their attendance, their sense of belonging and attachment, and their effort and focus while participating.⁵⁶ The CORAL program’s evaluation measured two of these factors — the number of semesters of participation between Fall 2004 and Spring 2006 and children’s sense of belonging to CORAL (measured in Spring 2006). As discussed in Chapter 5, the children in the studied sample attended one (2 percent), two (29 percent), three (6 percent) or four (63 percent) semesters between Fall 2004 and Spring 2006.

Table 14. Positive Outcomes on the CST-ELA from 2005 to 2006 by Groups’ Overall Lesson Ratings

OVERALL LESSON RATING	NUMBER OF GROUPS	TOTAL NUMBER OF YOUTH HAVING CST SCORES	PERCENTAGE OF CHILDREN WITH POSITIVE OUTCOMES FROM 2005 TO 2006
<i>Lower-rated groups</i>	21	83	67%
<i>Higher-rated groups</i>	22	151	75%
All groups	43	234	72%

Groups were designated lower or higher based on a median split of their scores on the Overall Lesson Rating. The scale of the rating was from 1 to 5. Groups in the lower half had Overall Lesson Ratings of between 2 and 3.43; groups in the higher half had Overall Lesson Ratings of 3.48 to 4.29.

When surveyed in Spring 2006, almost three-quarters of the children in this sample⁵⁷ also reported feeling a sense of belonging to the program (having agreed or strongly agreed to feeling that they were listened to, that their opinions mattered, that CORAL was a comfortable place to spend time and that they belonged at CORAL).

A stronger sense of belonging to CORAL was related to positive changes in children’s attitudes toward reading as well as attitudes and behaviors in school.

Our analyses to assess whether the duration of participation and sense of belonging were related to better outcomes between Fall 2004 and Spring 2006⁵⁸ reveal that children’s sense of belonging, but not the number of semesters of attendance, is consistently related to positive changes in youth’s attitudes toward reading and attitudes toward, and behaviors in, school. The stronger children’s sense of belonging to the program, the more likely they were to have a positive change in 10 of the 13 outcomes. Neither duration of participation nor sense of belonging was related to changes in reading performance.

Table 15 displays the associations between sense of belonging and outcomes. It shows the average change on each of the outcomes for children whose ratings of sense of belonging to CORAL corresponded to “low or neutral” (a neutral rating of 3.9 or lower on a scale of 1 to 5), “strong” (a rating of 4 to less than 5), or “very strong” (a rating of 5). The pattern of findings displayed in the table suggests that children who felt a stronger sense of belonging to CORAL were maintaining relatively steady attitudes, whereas those with less of a sense of belonging tended to have less positive attitudes over time. For example, earlier in this chapter Table 12 displays declines in “liking school” and “liking reading” among children in the overall sample; Table 15 indicates that children with a very strong sense of belonging do not show the same decline.

The downward shift in attitudes toward reading and school has been documented in developmental research that explores what some describe as the “fourth grade slump.”⁵⁹

It is important to note the possibility of characteristics of children or their families (for example, factors that motivated them to sign up for the program in the first place, or a greater propensity for actively engaging in activities) that were not measured but might explain why some children are more likely to develop a sense of belonging to the program and also explain why they fare better over time. Absent a control group, this study cannot account for that possibility.

Because children’s sense of belonging emerged as such a strong predictor of positive changes in outcomes, additional analyses were conducted to understand whether any of the quality ratings (the literacy strategies and classroom practices) might be associated with children developing a sense of belonging to the CORAL programs. No such relationship was apparent. However, children’s perceptions of CORAL as a place with positive peer relationships (in other words, they liked the other children at CORAL, got to know them really well, and had a lot of friends there) and the safety they felt in CORAL (measured in Fall 2004) were related to their sense of belonging.⁶⁰

Table 15. The Relationship of Sense of Belonging to Change in Children’s Ratings of School and Reading from Fall 2004 to Spring 2006 (all outcomes rated from 1 = low to 5 = high unless another range is specified)

	SENSE OF BELONGING TO CORAL			SIGNIFICANCE: Relationship Between Sense of Belonging and Change from Fall 2004 to Spring 2006
	Low or neutral N = 86	Strong N = 108	Very strong N = 126	
Reading Performance				
<i>Grade-level reading gains (Grade-level score)</i>	1.40	1.67	1.79	not significant
<i>Proportion of children with positive CST-ELA outcome 2004 to 2006 (yes or no)</i>	77%	83%	72%	not significant
Attitudes Toward, and Behaviors In, School				
<i>Pay attention and concentrate in class</i>	-.47	-.13	.03	***
<i>Like school</i>	-1.0	-.31	.01	***
<i>Come to class without finishing homework</i>	.05	-0.08	-.15	not significant
<i>Felt unsafe at school in the last 30 days</i>	.35	-.12	-.34	***
<i>Studied hard for a test in the last 30 days</i>	-.35	.03	.21	**
<i>Got in trouble at school in the last 30 days</i>	.59	.18	-.01	**
<i>Missed/cut whole day of school in the last 30 days</i>	-.13	-.10	-.09	not significant
<i>Wanted to go to school in the last 30 days</i>	-1.0	-.11	.32	***
Attitudes Toward Reading				
<i>Like reading</i>	-.75	-.19	.08	***
<i>Talked with someone about something read in the last four weeks</i>	-1.2	-.25	.21	***
<i>Amount typically read for pleasure after school (1 = no time to 4 = more than an hour)</i>	-.37	-.13	-.01	*
<i>Amount read books for pleasure in the last four weeks</i>	-.35	.15	.38	+
<i>Comfort with ability to read (reading efficacy)</i>	-.12	-.06	-.03	not significant

Results presented in the table are from a series of Ordinary Least Squares regression analyses with sense of belonging and duration of participation as predictors, controlling for demographics, English learner status, Fall 2004 reading level, Fall 2004 rating of the outcome of interest, stress, and three variables that were predictors of participation and belonging. Detailed analyses are presented in Appendix C. The three levels for sense of belonging capture children with low or neutral ratings (a rating of 3.9 or lower on the composite scale), strong ratings (4 to less than 5), or very strong ratings (5) on a scale from 1 to 5, from disagree a lot to agree a lot. The changes presented for each level of sense of belonging are averages after adjustments for the other variables in the regression. N = 320. +p<.10, *p = <.05, **p = <.01, ***p=<.001

Benefits to Specific Subgroups of Children

CORAL programs targeted low-performing schools serving low-income populations. Within that targeted population, the children served by CORAL reflect some diversity: About two thirds identified themselves as Latino/a; about 70 percent were assessed below grade level in reading in Fall 2004; and just over half of the children served were designated English learners.

The previous sections of this chapter described the overall outcomes for CORAL youth and then the effects of quality, participation and engagement on outcomes for the entire group of children in the studied sample. This section examines the outcomes for two subgroups of children: English learners compared to English-proficient children, and children starting far below grade level in reading compared to those at or above.

Table 16. Reading-Level Gains for English Learners Versus English-Proficient CORAL Children

	FALL 2004 AVERAGE GRADE-LEVEL READING SCORE	NUMBER OF CHILDREN	AVERAGE GRADE-LEVEL READING GAINS BETWEEN FALL 2004 AND SPRING 2006
<i>English Learners</i>	1.63	171	1.76
<i>English Proficient</i>	2.61	137	1.61
All	2.07	325	1.72

The average number of months between assessments was 17.

Table 17. Reading-Level Gains for CORAL Children At or Above Grade Level, One Grade-Level Behind and Two or More Grade Levels Behind in Reading in Fall 2004

READING LEVEL IN FALL 2004	NUMBER OF CHILDREN	AVERAGE GRADE-LEVEL READING GAINS BETWEEN FALL 2004 AND SPRING 2006
<i>2+ grades below</i>	176	2.03
<i>1 below</i>	68	1.82
<i>At or above</i>	81	0.95
All	325	1.72

The average number of months between assessments was 17.

This section first describes the subgroups’ overall outcomes, without taking into account levels of participation, engagement or the quality of the literacy programming to which they are exposed. It then explores whether program quality, participation or engagement in the CORAL program related in the same ways to the outcomes for children who differed on these achievement and demographic characteristics.⁶¹

English learners and children farthest behind in reading in Fall 2004 showed significantly greater reading-level gains compared to their counterparts who were English proficient or reading at grade level when they entered CORAL.

Table 16 shows the grade-level gains for English learners versus English-proficient children, and Table 17 shows the gains for children who began the study at different grade levels of reading. The pattern revealed in both tables shows greater gains for children who started further behind and for those who have been designated English learners. It is apparent that the

children remain behind in their reading levels; however, given the findings from studies of low-income children in poor performing schools that children tend to fall further and further behind, the fact that the CORAL subgroup children continue to show gains on their reading levels is worth noting and exploring further.

Although the reading-level gains reported in Tables 16 and 17 suggest that the program may be beneficial for subgroups of CORAL children, such as English learners or children far behind grade level in reading, these analyses concern the overall sample and do not take into account the role of quality, participation or engagement and whether these factors matter to the same degree for all children. To address this question, researchers conducted analyses to find whether quality ratings, number of semesters of participation, or sense of belonging were more positively (or negatively) related to outcomes for English learners or children who started further behind in reading.

Quality of the literacy programming had the same positive association with children’s reading gains, regardless of English learner status, or how far behind in reading children were in Fall 2004.

Our analyses revealed an overall similar pattern of positive relationships between the quality of programming and the achievement outcomes explored in this evaluation, regardless of English learner status or reading level starting in Fall 2004. Like the other children studied, the English learners benefited from higher-quality programming. Given the findings that the children furthest behind in reading and English learners gained more than did their counterparts, after-school program staff should continue to consider ways to target and enroll these children in the type of literacy-enriched programming utilized by CORAL. It is important, however, to keep in mind that the mix of English learners and English-proficient youth, as well as the mix of children of different reading levels in these programs, may be an important ingredient for a program’s success.

A stronger sense of belonging to CORAL had the same positive association with changes in children’s reading attitudes as well as school attitudes and behaviors, regardless of English learner status, or how far behind in reading children were in Fall 2004.

Similar to the pattern for program quality and outcomes, regardless of English learner status or how far behind in reading children were in Fall 2004, their sense of belonging to CORAL — and not their level of participation — was related to positive change on the reading attitudes, school attitudes and behavior outcomes measured in the evaluation.

The findings from this evaluation, while not conclusive, suggest that English learners benefited from their participation in CORAL. It is important to note, however, as Chapter 3 describes, that staff felt they could be supported and trained to help English learners even more. Although English learners show similar increases in grade-level reading gains over the course

of the evaluation period, they tend to remain further behind in reading, on average, compared to their English-proficient peers. Thus, improving program practices to benefit English learners even more is worth consideration.

Additional benefits not captured by reading-level assessments, test scores or surveys, but observed by school staff and parents of CORAL children, are reported in the next section.

Other Benefits

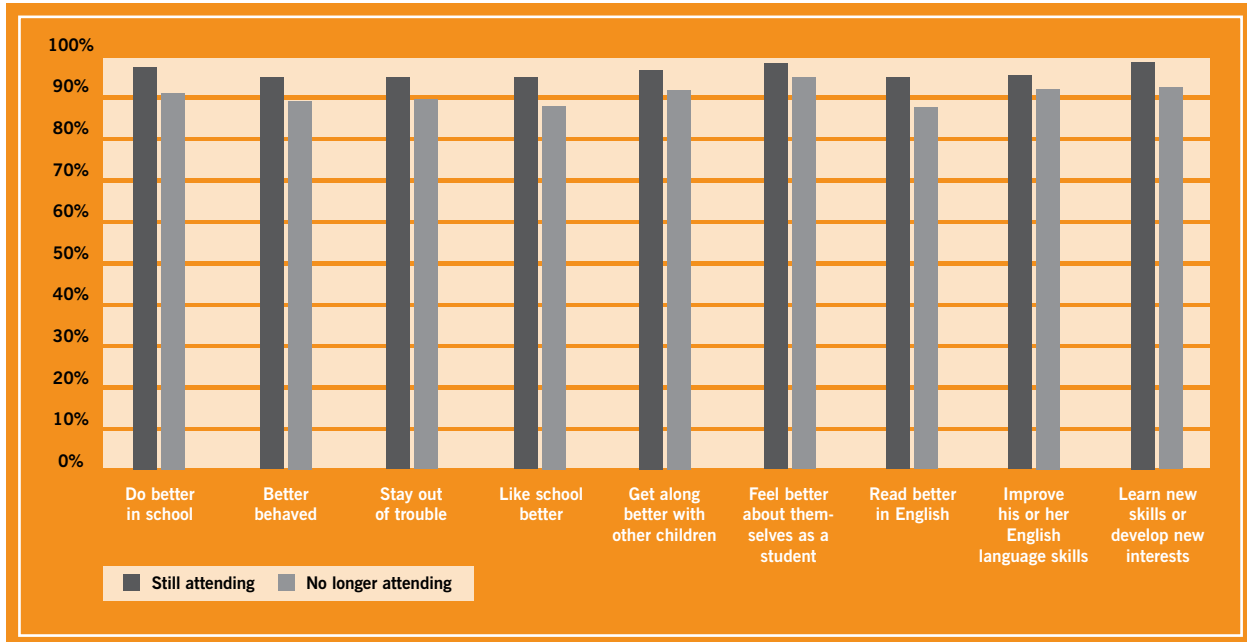
While the founding idea of the CORAL initiative was to help improve children’s academic achievement, the children’s parents and staff at the schools they attended also identified additional areas that they hoped CORAL would address. Among these were exposure to books and to the English language and increased confidence in reading and school performance. This section presents information from surveys of parents and interviews with school staff describing how these constituents felt the program had benefited CORAL children.

Parents’ Views of CORAL

As discussed in Chapter 2, a survey of parents in Spring 2006 indicated that they enrolled their children in CORAL for a variety of reasons, including to improve their grades in school, improve their social skills and have them gain more exposure to English. As shown in Figure 3, parents who responded to the survey (both those whose children still participated in CORAL and those whose children no longer attended) overwhelmingly felt that CORAL fulfilled these goals for enrollment. Over 90 percent of parents reported they “agree” or “strongly agree” when asked whether CORAL had helped their children’s academics, behavior, social skills and English abilities.

While almost all parents reported satisfaction in these areas, those parents whose children had stopped attending CORAL were slightly less satisfied than those whose children were still enrolled. For example, 98 percent of parents whose children still attended — as compared with 91 percent whose children no longer attended — reported that CORAL helped their children

Figure 3: Parents' Views of How CORAL Helped Their Children



Based on 501 parent surveys gathered in Spring 2006.

do better in school. Even with these lower levels of satisfaction, however, 88 percent of parents whose children stopped attending CORAL agreed with each of the statements.

In focus groups conducted in Spring 2005, parents were able to share their thoughts on CORAL and its work with their children. In these focus groups, as in the survey, most parents agreed that CORAL helped their children succeed in school. In discussion, however, they were able to provide more detail, with many parents explaining that their children had developed more responsible study habits, taken greater interest in schoolwork and become more confident in their abilities at school.⁶²

Impressions of School Staff

School staff spoke about a number of different areas in which they believed the CORAL program had helped the children. Because specific questions were asked about the role of the literacy portion of the program, teachers and principals talked most explicitly about the difference they saw in literacy-related outcomes among the children who attended CORAL. Overall,

when CORAL was working well, school staff felt that children got to talk and practice oral language skills, hear stories and build confidence for the school day. Staff noted that the children were reading more and enjoying reading. Staff also felt that CORAL played an important role in providing increased opportunities for the children to be exposed to vocabulary and ways of talking about stories that made them more self-assured when those topics were part of their school-day lessons. In addition to the benefits school staff observed related to oral language and reading, they also mentioned social benefits of participating in CORAL. For example, staff described that children were able to learn how to get along better with one another.

Children who participated in CORAL benefited — particularly those who were exposed to higher-quality literacy programming and who felt more strongly engaged. The following chapter discusses the costs associated with providing CORAL after-school programming, including the investments in developing the kind of program quality that was associated with positive outcomes for the children who attended.

CHAPTER 7

What Did CORAL Cost?

Across the country, public investments in after-school programs have never been greater, but a review of the recent literature reveals a lack of up-to-date information about the programs' typical costs and even less information about the costs of creating a high-quality program.⁶³ While this evaluation did not include an exhaustive cost study, research on the CORAL initiative can contribute to this important discussion. Cost information was gathered from basic budgets of four of the CORAL cities and through interviews of staff about fundraising, budgeting and sustainability.⁶⁴ This chapter uses those data to present an overview of CORAL's funding sources and expenditures during the initiative's first two years of providing balanced literacy programming. In particular, the chapter addresses these questions:

- What were CORAL's major sources of funding?
- What were the average costs of operating CORAL?
- What was the average cost per day for each youth who attended?
- What were the major expenses at the site and city levels?
- Which expenses directly contributed to the quality of the programming?

Before turning to findings, it is important to note that the costs presented in this chapter, like many cost analyses of after-school programs, are estimates. The findings are based primarily on a one-time cost survey in which the cities described their budgets, staff salaries and funding sources. This approach gathered basic cost information, but also had limitations. First, it required comparing costs across four cities, even though the cities sometimes organized their budgets in different ways and accounted for costs differently. Second, some cost estimates, such as the value of volunteer time or the use of school space, are beyond the scope of this study.

Finally, all of the after-school programs included in this analysis were school-based, preventing any conclusions about the comparable costs of community-based after-school programs. Even given these limitations, the available information provides a useful estimate of the costs of operating CORAL over two years as well as an indicator of how these funds were distributed among various programmatic needs.

CORAL'S Funding Sources

CORAL programming was supported using various strategies. All sites used grants as well as in-kind donations.

Monetary Funding

The CORAL initiative was founded and, at least through the period of this evaluation, primarily funded by The James Irvine Foundation. The Foundation began by funding a planning stage, in which community organizations in each city worked together to develop partnerships, create curricula and program structures, and determine program sites. It then provided each city with a six-year grant for operations, initially for \$2 million per year. The grant amount was gradually reduced over the years so that by 2005–2006, each city was receiving approximately \$1.2 to \$1.4 million, reflecting the intention to create a sustainable funding model with the target of supporting 600 children at \$2,000 per child — a cost more in line with other available funding sources.

Irvine's significant investment allowed the CORAL cities, especially in their initial years, to focus on providing high-quality programming rather than on issues of fundraising or sustainability. In 2005–2006, Irvine funding accounted for approximately 80 percent of CORAL's support across the four cities. Though one city raised a small amount in private donations, almost all other funding came from public sources, generally through grants awarded to school districts and then distributed to CORAL for programming in the district. Two cities received funding through the federal 21st Century Community Learning Center grants for after-school programs, ranging from about \$300,000 to \$600,000. Both of these cities also received funding from state sources: one for \$200,000 from CalWorks (a state program that reimburses after-school programs for providing services to eligible low-income youth) and the other for \$90,000 from California's After School Education and Safety program (ASES).⁶⁵ A third city required two of its schools that joined the initiative after startup to contribute \$50,000 each (monies the schools had received as part of their after-school program dollars) to the costs of running CORAL.

Three of the CORAL cities also hoped that the federal Supplemental Educational Services (SES) program — which provides funding for tutoring services for children in eligible schools (a provision of No Child Left Behind) — would be an additional source of funds,⁶⁶ but as of 2005–2006 it proved to be only a minor source of these cities’ overall funding.⁶⁷

In-Kind Donations

In-kind donations represented another important CORAL resource. All of the cities were successful in obtaining some relatively small in-kind donations, such as tickets to amusement parks or books to be distributed as gifts, that allowed them to offer “extras” at their programs that would not have fit in their budgets. Two cities were successful at obtaining larger-scale donations, such as regular donations of snacks, in one case worth \$200,000. One city partnered with other organizations (the YMCA and AmeriCorps) to provide site staff, enabling some team leader positions to be funded through these partnerships. Another city also partnered with a local organization to provide enrichment activities — a service that all of the other CORAL sites paid for — free of charge at one site.

By far the most significant in-kind donation for all of the cities was the use of school facilities. In 2005–2006, all four CORAL cities detailed in this chapter operated their programs solely in schools, thus freeing them from buying or renting program space (beyond their central offices). All of the schools allowed CORAL to use classrooms and cafeterias free of charge; most also provided janitorial services to clean the spaces at the end of each afternoon, and some schools even provided transportation for CORAL participants at the end of the afternoon. These arrangements were accompanied by frequent negotiations and compromises — for example, over exactly which classrooms were available — but saved the CORAL programs a significant amount of money. This was a key advantage of operating programs within a school rather than a community-based setting.

What Did It Cost to Run CORAL?

Between the Irvine grant and funding from secondary sources, the CORAL cities each spent between \$1,447,613 and \$1,776,890 during the 2005–2006 program year, with an average of \$1,612,055 per city (see Table 18). Since in-kind donations represented a significant portion of some cities’ budgets, it is useful to include the monetary equivalent of major donations — including donations of books, snacks and staff — in the overall spending calculations. When these items are included, the budgets increase to an average of \$1,708,932 per city, ranging from \$1,456,045 to \$1,808,592.⁶⁸

Multiple factors contributed to the range in spending across cities, including, for example, variations in number of children served, number of days open per year, number of staff, size of staff salaries, types of enrichment activities offered and the local cost of living. To account for two of these factors — differences in number of children served and number of days the program was open during the year — and develop a more consistent way to compare costs across programs, we calculated a unit cost, which represents the price of serving each child who attended each afternoon.

In 2005–2006, the CORAL cities had an average unit cost of \$19.92 (including both cash funding and in-kind donations).⁶⁹ In other words, the programs spent about \$20 on each child who attended any afternoon, or about \$6.25 per hour. Across the cities, this unit cost ranged from a low of \$11.39 to a high of \$33.10, with the range likely reflecting differences in the number of hours per day the programs were open, salaries, the staff-to-youth ratios and the number of outside enrichment providers hired.

How do these costs compare to spending on other after-school programs, or the funding typically available to after-school programs? Such comparisons are extremely difficult to make and necessarily require caution. Beyond the difficulty of comparing programs that potentially offer different activities, are of varying quality and have different goals, there is no standard

methodology for calculating program cost.⁷⁰ For example, in a study of another social service field (mental health care), researchers found that calculated unit cost could range from \$108 to \$538 per hour for the same program, depending on what analysis methods were used.⁷¹

Given these cautions, a rough comparison of after-school costs reveals that the CORAL unit cost (approximately \$20) is in line with those found in evaluations of other after-school programs. Three evaluations of other after-school programs conducted between 2000 and 2002, for example, calculated average unit costs at \$15, \$16 and \$27 per day.⁷² Most public sources of after-school funding would need to be supplemented to meet these levels. In California, the After School Education and Safety program — the largest source of public after-school funding in the state — offers \$7.50 per child per day plus a required \$2.50 match from programs. The 21st Century Community Learning Centers, for which each state awards grants at its discretion, the average annual funding per child is \$1,000 — or \$7 to \$8 per day, per child for a typical school year.⁷³

Components of CORAL Costs

The CORAL initiative operated at multiple levels: Each program site was located within a citywide organization, which itself was part of a statewide network. Operations at the site and city levels involved particular staff and activities, accompanied by specific costs. Despite occasional overlap — a site staff member, for example,

may have participated in fundraising for the whole city — most costs can be distinguished by level and are examined below in this way. Statewide costs are discussed in the final section of this chapter.

Site-Level Costs

On average, 56 percent of each CORAL city’s expenditures (including those covered through both cash and in-kind donations) was directed to site-level costs.⁷⁴ These expenditures maintained day-to-day operations at the sites, including salaries for site staff, program materials, snacks and, in some cases, transportation for participants (see Table 19). Staff salaries and benefits were by far the largest component of site-level expenses, constituting between 76 percent and 96 percent of all site-level costs.

These site staff salaries went primarily to team leaders and site coordinators and, in smaller amounts, to contracts with enrichment providers. There was relative consistency in the responsibilities of team leaders across CORAL sites — including preparing for and leading literacy lessons, planning and leading enrichment lessons at least a few times a week and generally supervising a group of youth. Cities varied slightly in the hourly wages they paid team leaders, with wages near \$9 or \$10 per hour in three cities and \$14 per hour in the fourth.

In contrast to the consistency among team leader roles, the responsibilities of site coordinators varied widely across the state. All site coordinators acted as “after

Table 18. Overall and Per-Child Expenses for Four CORAL Cities, 2005–2006

	AVERAGE	RANGE
Total CORAL Budget	\$1,708,932	\$1,456,045–\$1,808,592
<i>Cash funding</i>	\$1,612,055	\$1,447,613–\$1,776,890
<i>In-kind donations (staff, book, and snack donations only)</i>	\$96,877	\$8,432–\$327,000
Per Diem Spending per Child	\$19.92	\$11.39–\$33.10
<i>Number of weeks program is open</i>	37.4	33–45.8 weeks
<i>Number of days per week program is open</i>	4.7	4–5 days
<i>Number of children served each day program is open</i>	487	260–871 children

school principals” for their sites, supervising team leaders, handling any behavior or emergency issues that arose with the CORAL children, communicating with parents and generally taking responsibility for the success of each day. But site coordinator positions varied significantly in the amount of training they were expected to prepare and lead, their responsibility for data collection and entry, their involvement in scheduling and supervising outside providers, and their responsibility in managing site budgets. In some cities, these duties were assigned to site coordinators while, in others, they were assigned to staff at city-level management positions. Accordingly, site coordinator salaries ranged from hourly wages of \$15 paid only during the months of program operation (42 weeks a year, or an equivalent of about \$19,000 a year) to full-time, year-round salaries of \$35,000 to \$50,000.

City-Level Costs

The remainder of the CORAL cities’ budgets—approximately 44 percent—was spent for city-level operations. These costs included executive and administrative staff salaries, as well as materials and activities that contributed to the quality, consistency and sustainability of the program across the city (excluding funding limited to any one site). The biggest component

of city-level costs was salaries, in this case for positions such as executive directors, literacy directors and operations directors. Other significant expenditures at this level included facilities (for the central CORAL office space in each city), insurance, and upkeep on technology and other office-related equipment.

Investing in Quality

Initially, spending 44 percent on city-level costs may seem high, especially given the desire of many funders to see as large a percentage of their grants as possible go directly to programs.⁷⁵ California’s After School Education and Safety initiative, for example, allows only 15 percent of its funding to support such costs (though grantees may use additional funding accessed through other sources). The CORAL programs, however, found that many of these city-level expenditures were essential for supporting staff positions and other costs directly related to improving the quality of programming at each site. For example, an average of 16 percent of these city-level costs supported the work of the literacy director or director of curriculum, and another 2 percent went directly to training supplies or fees. These expenditures put the CORAL programs in a stronger position to provide participants with quality activities.⁷⁶ In fact, executive

Table 19. CORAL Costs at the Site and City Levels

	AVERAGE	RANGE
Total Site-Level Costs	\$965,274	\$674,836–\$1,190,040
<i>Salaries and benefits</i>	86%	76%–96%
<i>Snacks</i>	9%	0%–19%
<i>Books and other supplies</i>	4%	3%–7%
<i>Transportation</i>	1%	0%–2%
Total City-Level Costs	\$743,658	\$618,553–\$851,689
<i>Salaries and benefits</i>	71%	62%–78%
<i>Facilities</i>	9%	6%–14%
<i>Supplies and communications</i>	5%	4%–6%
<i>Accounting and insurance</i>	5%	1%–12%
<i>Conferences and workshops</i>	2%	1%–4%
<i>Other</i>	8%	1%–14%

staff noted that their ability to devote resources to these kinds of expenses was an important benefit of the Irvine grant. Staff were concerned that, as they transitioned to other sources of funding that might not provide this type of support, the quality of programming could suffer.

In fact, as noted in Chapter 4, improvement in the quality of the literacy programming seen between Year One and Year Two appeared to be directly related to the investments cities made in key staff positions, training and monitoring, and books for independent reading. The approximate cost associated with each of these investments in quality is estimated as follows:

- **Hiring a literacy director.** Essential to program quality, especially early in implementation, was the hiring of a literacy director at an average salary of \$42,300. Literacy directors were selected for their experience in literacy instruction and were primarily responsible for staff training and monitoring.
- **Time for training and monitoring.** Beyond the literacy director's salary, program quality improvement required an investment in staff time and materials for training and monitoring. This generally consisted of one or two weeks of initial training for all staff, followed by ongoing monthly trainings that lasted from two to five hours each. Considering the range in staff salaries and the number of staff at each city, training added approximately \$20,000 to \$93,000 to cities' budgets — in order to pay for site coordinators and team leaders to attend. In other words, an average of 3 percent of all salary costs was devoted to training time. In addition, the cities reported spending an average of about \$12,000 on additional related costs, such as training materials.

Trainings were most successful when paired with on-site monitoring and coaching. In all cities, the literacy director (or literacy direction team, in one city) was ultimately responsible for these observations. Most spent between two and four afternoons a week conducting observations at the sites. In two cases, the cities hired educational liaisons, usually teachers from the school, to conduct observations and coaching on site. Salaries for these staff ranged from \$14,000 to \$20,000; costs

ranged based on the number of educational liaisons hired and the hours per week they worked. All cities also required site coordinators to observe and coach team leaders as a supplement to observations made by literacy directors and educational liaisons. Though site coordinators were constantly moving in and out of classrooms to informally supervise staff, they were generally responsible for one full observation per week of an entire 90-minute lesson. This observation time, plus time spent documenting the observation and debriefing with the team leader, corresponded to an average of approximately \$1,400 of the site coordinator's salary per site, per program year.

- **Books for independent reading.** A sufficient supply of books was critical for engaging children during 20 to 30 minutes of independent reading time, three to four afternoons a week. In 2004–2005, the first year that all the programs provided balanced literacy activities, the cities spent an average of \$41,680 on books (see Table 20). In order to supplement their libraries in the following year, they spent an average of \$6,856 on books and received, on average, an additional \$5,858 in donated books.

The cost of books in 2004–2005 represented 3 percent of the programs' overall budgets. Although in retrospect it seems apparent that a literacy program would require substantial numbers of books, many CORAL staff were surprised by just how expensive this component was. The cities took different approaches to meeting the need for independent reading books. Some invested in pre-packaged bins of books organized by reading level. In other cases, city leaders bought less expensive, non-packaged books, or received book donations — in either case, dedicating significant staff time to leveling and sorting them. Regardless of method, book costs and related staff time were substantial. Even so, at the end of 2005–2006, several team leaders continued to express a need for more books for program participants.

Table 20. Expenditures on Books for Independent Reading Across the Four Cities

	AVERAGE	RANGE
2004–2005		
<i>Bought by cities</i>	\$41,680	\$15,274–\$66,446
<i>Donated to cities*</i>	n/a	n/a
2005–2006		
<i>Bought by cities</i>	\$6,856	\$1,680–\$15,000
<i>Donated to cities</i>	\$5,858	\$0–\$15,000

* Data are not available for 2004–2005 book donations.

More challenging to quantify are the costs associated with creating an environment in CORAL where youth experienced meaningful relationships with adults, felt supported and valued, and had a strong sense of belonging. The CORAL staffing structure, which provided one team leader who stayed with children for the entire afternoon, was likely a key component of this environment. Maintaining youth-to-staff ratios of 12 to 20 children to one team leader was another key component. Additionally, continued investment in the variety of activities that CORAL offered — including enrichment, literacy, physical recreation and homework help — was likely an important contributor to the high rates of attendance and retention that CORAL achieved. While assigning a “cost value” to these factors is beyond the scope of this study, they are important factors to consider for programs that aim to successfully engage large numbers of children.

Initiative-Wide Investments

Beyond site- and city-level costs, Irvine provided additional funding for the CORAL initiative as a whole at the statewide level, helping to lay the groundwork for quality program implementation in each city. These funds supported three critical areas, including the development of a management information system, provision of initiative-wide technical assistance, and rigorous observations of program quality with feedback given to the sites.

A major portion of the additional funding was used to develop the computerized management information system that enabled the CORAL cities to track enrollment demographics, participation trends and outcomes data — information that was critical to the programs’ ability to identify whom they were serving, where they were reaching goals for attendance, and the degree to which they were achieving other program goals. Developing this system in conjunction with city staff and training staff on using the system initially cost between \$20,000 and \$25,000 per city.

In addition, approximately \$140,000 supported technical assistance each year. One key investment for improving and monitoring program quality was the funding for a full-time senior P/PV program officer who regularly traveled to all five CORAL cities to conduct trainings, observe activities, provide feedback and generally support the literacy directors in improving program quality. This individual also hosted a yearly Literacy Summit convening all of the literacy directors for training and to share lessons from their cities.

Finally, approximately \$60,000 was invested in researchers’ time each year of the evaluation to conduct activity observations on a regular basis. Though conducted primarily for evaluation purposes, the observation process included the provision of feedback to the cities about the quality of programming observed. This proved especially useful early on in implementation when programs were not yet structured to regularly perform their own observations of their instructors.

Although these funds were provided to an organization external to CORAL, similar programs may consider investments in the internal capacity or external support needed to develop, for example, a management information system, and to undertake other tasks that contribute to quality implementation, as demonstrated by CORAL.

This chapter has described the CORAL initiative's funding sources and expenses, unit (per youth) cost, and steps that Irvine and the CORAL cities took to invest in quality programming after school. The next chapter brings together the lessons from this and the preceding chapters and offers some implications for policymakers and practitioners.

CHAPTER 8

Conclusion

The story that emerges from the evaluation of CORAL is that a well-structured academically oriented component – in this case, literacy – can be integrated into an existing after-school program relatively quickly, and that by focusing on consistent, high-quality implementation of literacy strategies, such a program can benefit the children who participate. The preceding chapters in this report document the size and scope of CORAL and the diversity of its participants, the quality of its programming and the factors that helped to enhance quality, the level of interest and engagement of children in the CORAL activities, and the links between quality, engagement and positive outcomes for children. This concluding chapter presents the main findings from the evaluation of the CORAL after-school initiative during the two years of implementing its literacy component. The chapter also summarizes implications for policy, programs and research.

Summary of Findings from the Two-Year Evaluation of CORAL

The findings described in this report have been drawn from two years of data collection on literacy implementation and outcomes using a wide range of instruments that permit linking these data together and describing important patterns of relationships between the quality of programs, engagement and outcomes. The results of the study are informative for program designers, funders, researchers and policymakers — people who share an interest in making after-school programs as effective as possible for children. The children involved in CORAL represented great diversity in their ethnicity and language proficiency and also, to some degree, in their performance at school. This diversity adds dimension to an examination of the role of the after-school program for different subgroups of youth, in particular English learners — a topic often missing in after-school research.⁷⁷

Key findings include:

Children’s reading success was strongly related to programming quality; CORAL participants showed greater gains in grade-level reading and performed better on standardized tests when they were exposed to more consistent and higher-quality literacy activities.

Results from the evaluation’s first year indicated greater gains over five months on the individualized reading assessment (.45 grade-levels in reading) for children exposed to consistent implementation of the balanced literacy strategies — read alouds, book discussions, independent reading, writing, vocabulary development and skill development activities — and higher-quality implementation of those strategies. In contrast, those children exposed to inconsistent or low-quality implementation of the literacy strategies gained just .26 grade-levels in reading.

In the second year of the evaluation, when almost all of the staff leading the activities had improved and were consistently using the literacy strategies, the average reading gain for all children in the sample (based on the individualized reading assessment) was .44 grade levels — comparable to the average gain of .45 for children exposed to higher-quality activities during Year One. Also in Year Two, children in groups where team leaders used stronger classroom practices (providing strong adult support, skilled group management, high-quality instruction, and help in making connections between the children’s lives and the books they were reading) in combination with more consistent and higher-quality implementation of the literacy strategies were more likely to have a positive outcome on the CST-ELA test. (A positive outcome was defined as moving from “far below basic” or “below basic” up to a higher level, or remaining “basic,” “proficient” or “advanced” from one year to the next.)

The evaluation design did not include a comparison group; therefore, it cannot be firmly concluded that the gains made by the CORAL youth are any different from what might be expected had they not taken part in the program. However, the finding that the quality and consistency with which CORAL instructors delivered the literacy programming are related to reading-level gains and improvement on the CST-ELA suggests that the program had some bearing on these gains. This finding is in keeping with a recent meta-analysis of the impact of after-school programs on social and personal outcomes (including academic performance), which found that programs that had an impact on children's feeling and attitudes, indicators of behavioral adjustment and school performance shared a key characteristic: They were sequenced, active, focused and explicit (SAFE).⁷⁸ CORAL's literacy programming adhered to each of those practices.

Higher levels of engagement were related to positive changes in children's attitudes toward reading as well as attitudes and behaviors in school.

Children's engagement in CORAL, as measured by their sense of belonging, was an important contributor to changes in 10 of the 13 outcomes examined in the areas of reading attitudes, as well as school attitudes and behaviors. That is, the stronger the children's sense of belonging to the program, the more likely they were to have a positive change in outcomes that included enjoyment of reading, liking and wanting to go to school, and time spent reading after school. (Children's levels of participation in CORAL were not related to changes in these outcomes.)

Because children's sense of belonging emerged as such a strong predictor of positive changes in outcomes, additional analyses were conducted to understand whether any of the observed program quality ratings (for example, the literacy strategies and classroom practices) might be associated with children developing a sense of belonging to the CORAL programs. But no such relationship was apparent. However, children's perceptions of CORAL as a place with positive peer

relationships (in other words, they liked the other children there, got to know them very well, and had a lot of friends there) and how safe they felt in CORAL (as measured in Fall 2004) were positively related to their sense of belonging (measured in 2006).

English learners and children far behind in reading showed similar gains when compared to their peers.

This study provided important information on the role of after-school programs for English learners, a rapidly growing population in California and throughout the United States. Slightly more than half (53 percent) of the children in the CORAL study were identified as English learners, a greater proportion than documented in other studies of after-school programs.⁷⁹ English learners gained as much as English-proficient children who had the same level of participation and were exposed to the same level of quality.

Findings from this evaluation also demonstrate that an after-school program can benefit children who are far behind in reading. Children who were two or more grade levels behind in reading based on the individualized reading assessments gained just as much as their higher-achieving counterparts, over the same period of time.

Without a comparison group, it is difficult to place these findings in context. However, previous studies have suggested that children from low-income families may fall further and further behind in reading between first and fourth grades.⁸⁰ The CORAL experience offers promise in that the children who were most behind and those who were English learners kept pace in their gains.

Although English learners gained just as much as English-proficient youth did over the course of the evaluation, they started further behind — so programs can and should do more to decrease the gap. Interviews with school and program staff suggest that these professionals would welcome more training specific to working with English learners, including strategies for helping them during literacy activities.

In addition to these promising outcomes for the children involved in CORAL, the evaluation also identified crucial program achievements and characteristics that laid the groundwork for the positive benefits participants derived. These include:

The quality of literacy programming was increased relatively quickly. By the end of the second year of implementation almost all (88 percent) of the literacy activities observed had reached a moderate level of quality. This was a key achievement, as quality was found to be related to children's reading gains.

In Fall 2004, the CORAL programs began the process of incorporating 60 to 90 minutes of literacy, three to four afternoons per week, into their existing array of enrichment and recreational activities. At the end of the first year of the evaluation, about one-third (36 percent) of the classrooms observed were reaching a moderate level of consistency and quality in implementation of the literacy program model. The CORAL city directors and staff drew on information from the first-year evaluation, as well as lessons learned from their own experiences, as they developed approaches for improving the quality of their programming. Their efforts included having an effective literacy director in place, targeting trainings for team leaders, monitoring and coaching on a regular and ongoing basis, and focusing on strengthening the independent reading component of the balanced literacy lessons.⁸¹ By the end of the second year of balanced literacy implementation, 88 percent of the observed groups had achieved at least a moderate level of quality in their literacy programming.

The CORAL program successfully served a diverse group of children (in terms of age, English proficiency and academic need) in large numbers and attained high levels of participation and engagement.

Total CORAL enrollment statewide in the 2004–2005 school year, when the evaluation began, was 5,321, ranging from 585 to 2,081 across the cities. Most youth served were elementary aged, and they came from varied backgrounds and cultures. The highest percentage were Latino/a (about 68 percent), followed by African American and Asian American children. Over half (53 percent) of CORAL children were designated English learners, and 89 percent of all participants were recipients of free or reduced-price lunch. According to their CST-ELA scores from Spring 2004, only a small portion (16 percent) of the children met or exceeded the grade-level proficiency standards for reading. Of the sample explored in most depth in this evaluation, 50 percent were reading two or more grades below level, and an additional 20 percent were reading one grade below level.

Children attended CORAL an average of 110.3 days over the 2005–2006 school year or an average of 3.0 days per week (for an over arching average attendance rate of 73 percent of the days the program was open). Overall, 69.3 percent attended more than 75 days during the year.

These attendance rates appear particularly strong when compared to other studies of after-school programs. A first-year evaluation of the 21st Century Community Learning Centers, for example, found that children attended an average of 58.3 days over the year, and

only 16.9 percent attended more than 75 days of programming.⁸² A review of 73 after-school programs found 11 programs with youth attendance ranging from 15 percent to 26 percent, and an additional three programs with attendance ranging between 26 and 50 percent.⁸³ The remaining programs did not have available attendance data.

Beyond rates of attendance, the findings suggest that children were highly engaged in CORAL. Positive adult-youth relationships and a strong sense of belonging to CORAL appear to be strengths of the program. Almost all children (97 percent) reported that there was at least one adult at CORAL who supported them and whom they could talk to, and 73 percent indicated that there were two or more such adults. More than 85 percent of children agreed that staff in literacy activities paid attention to and cared about them. More generally, CORAL seemed to be a safe space for children where, in addition to feeling cared for, they felt comfortable, successful and involved. About 90 percent of children indicated that they felt safe at CORAL. Almost three-quarters (71 percent) reported that they felt a sense of belonging to CORAL.

CORAL demonstrated that after-school programs can provide dynamic and fun programming that blends academics and enrichment activities in a way that is beneficial to children and meets the needs of its other constituents, including parents and schools.

CORAL was designed to meet multiple needs: to help boost the academic achievement of children who were struggling in their efforts to learn to read, to provide them with enriching experiences that they might not otherwise have access to and to let them have fun.

Overwhelmingly, parents indicated that they enrolled their children in CORAL to help them do better in school; and, according to reports from parents, the program was meeting that goal. Over 90 percent of parents (98 percent of those with children still enrolled and 91 percent of those with children no longer attending) indicated that CORAL helped their children do better in school.

Schools, under pressure to increase the academic standing of their students, were interested in after-school literacy programming, but the enrichment activities were also of particular importance to them because many of the schools lacked time during the school day or money in their budgets for activities such as art, music or dance. CORAL provided an array of literacy, homework help, enrichment and physical education activities to meet these interests and needs.

Overall, the children responded relatively positively to the CORAL programming, with almost three-quarters saying they liked literacy activities, and close to 90 percent rating enrichment and physical activities that high. In interviews, staff identified the importance they placed on making literacy programming fun for children. They did so by finding and reading books that the children were interested in, having conversations about the books and drawing connections between the stories read and the children's lives.

Although this study gathered the most in-depth information on the quality of balanced literacy programming, the discussion of CORAL can be taken as a case study illustrating that academic content can be delivered in a way that motivates participation and retention and that helps support positive outcomes for program participants.

Costs for providing CORAL's combined academic and enrichment program (just under an estimated \$20 per day for each child in attendance) were similar to those of other after-school programs.

Results from a survey of staff in four of the CORAL cities⁸⁴ about costs associated with running the CORAL program suggest an average per diem per child cost of slightly under \$20. This figure takes into account site-level costs along with administrative and oversight costs incurred by the cities' lead agencies. It also takes into account city-level (and, to a lesser extent, site-level) costs directly related to investments in providing quality literacy programming — including the expenses associated with hiring a literacy director, training team leaders, monitoring the quality of instruction, and obtaining an adequate number of books for independent reading.

The costs of CORAL are in keeping with costs associated with several other large-scale after-school programs; however, they are greater than the cost per diem provided by public funding. For example, 21st Century funding provides approximately \$1,000 per child per year, or \$7 or \$8 per day. California Proposition 49 funding, which has recently become available, offers \$7.50 per day plus a required \$2.50 match from individual programs.⁸⁵

Beyond these site- and city-level costs, The James Irvine Foundation provided additional funding at the statewide level (for the CORAL initiative as a whole) that helped lay the groundwork for implementing a high-quality program in each city. A significant portion of the additional funding was used to develop a computerized management information system to enable the CORAL cities' staff to track enrollment (for example, demographic data), participation trends and outcomes data — information that was critical for the programs to be able to identify whom they were serving, where they were reaching goals for attendance, and the degree to which they were achieving other program goals. Developing this system in conjunction with city-level staff, and training staff on use of the system initially cost between \$20,000 and \$25,000 per city. Initiative-level funding also included approximately \$140,000 for technical assistance-related expenses during each of the first two years of implementing the literacy component, and \$60,000 per year for researchers' time in conducting observations of the literacy lessons on a regular basis and providing feedback to the sites.

Implications for Programs, Research and Policy

The information learned from the CORAL evaluation also has important implications for the after-school field, including practitioners, those who research after-school programs with the goal of improving their quality and outcomes, and the policy community interested in the potential of after-school programs to provide children with enriching experiences and academic support. A number of key lessons emerge:

When considering CORAL's success in promoting gains in literacy, it is important to keep in mind that these results are likely the product of a “mixed” program that combined quality literacy instruction with enrichment activities and homework help.

While a comprehensive assessment of the quality of the non-literacy programming and its link to children's outcomes was beyond the scope of this report, key stakeholders — including participating youth, their parents and school staff — viewed CORAL's enrichment programming as an important factor in engaging children in the program. And, children's engagement in CORAL was related to positive changes in their attitudes toward reading as well as their attitudes and behaviors in school.

At the same time, enrichment programming, while clearly a critical element of CORAL, did not receive the same level of attention or funding in each city during the time frame of this evaluation. While some cities continued to use outside community-based organizations to plan and lead activities, others had their team leaders provide enrichment programming. In either circumstance, non-literacy programming did not receive the same type of monitoring and support as literacy programming, and its quality is less certain. As a result, the CORAL directors acknowledged that they need to turn their attention to enrichment activities. Presumably, the same strategies that promoted higher-quality literacy programming (including training, monitoring and coaching) can be applied to enrichment programming as well.

Thus, other program sites interested in adopting the CORAL approach are advised to take similar care to ensure that the literacy programming is embedded in a broader context of enrichment programming.

Increasing the quality of a targeted literacy component is clearly possible, but requires focused effort. Program staff’s access to crucial data on program quality and practices, and the ways in which they were able to use that information for program improvement, were critical components of their success.

The increase in quality achieved by the CORAL cities between Year One and Year Two was crucial to the reading gains achieved by participating youth. Getting to this level of quality, and doing it so quickly, was a process driven by data. Program administrators had access to data from observations and Year One evaluation findings that revealed a correlation between quality and outcomes, providing them with crucial direction for program improvement and the evidence necessary to convince key stakeholders (including parents and school administrators) of the importance of these changes.

By the second year of evaluation, all the cities had invested in factors that the first-year evaluation findings suggested led to better quality. Perhaps most crucially, the evaluation spotlighted the importance of the role played by the literacy director in providing initial and ongoing training to site staff about successful literacy strategies, in regular monitoring of on-the-ground programming, and in coaching to help support the team leaders and site coordinators. City directors used this information to more clearly define and strengthen the literacy director’s role, to develop improved and targeted training, and to implement consistent program monitoring followed up with feedback and coaching.

The evaluation also highlighted the importance of the independent reading time and of having a large enough volume and variety of books for children to read. As a result, CORAL programs invested in more books for the children. In addition, CORAL city directors built on this strategy of using data to help identify strengths and weaknesses of program implementation. By the second year of evaluation, program staff began to make the transition to generating their own observation data so they could continue to identify and address gaps in

the consistency and quality of the literacy activities. All of these things were resource intensive both in terms of dollars and staff time. However, they all led to stronger programming during the second year of implementation of literacy activities.

The after-school field is in a state of expansion. In California alone, due to the influx of Proposition 49 dollars, an estimated 10,000 new after-school positions exist. Given the level of funding, these positions are likely to be filled by staff similar in background and experience to CORAL team leaders. The training and support of such staff is a critical issue. Lessons from the CORAL experience are particularly timely. They offer insight into promising approaches for professional development and support. Further, the CORAL strategies that served to elevate the quality of literacy programming may be likely to produce positive results when applied to other youth-serving programs.⁸⁶

The fact that English learners achieved academic gains in equal measure to other children in the program deserves particular attention. In the current environment of scarce resources for academic support, and the evolving demographic profile of the children in this country, these results take on added significance.

Since they started further behind in their English literacy skills, it is particularly noteworthy that English learners gained just as much as English-proficient youth through their participation in the CORAL program. Other after-school programs may consider ways to increase English learner access to their programs, if they are not already encouraging these children to participate.

In considering this, however, it is important to note that the findings from this study do not support the idea that the CORAL approach be directed exclusively at English learners. The CORAL classes were comprised of children with a mix of language backgrounds and achievement levels. While outside the scope of this study, it is likely that participants in the CORAL program may have benefited from experiencing

programming with other children of diverse abilities and characteristics. It may, then, also be important to avoid using the CORAL approach as an overly targeted intervention, and instead consider its utility as an approach that benefits a wide variety of children.

The accumulation of results from this evaluation is promising but not conclusive. Future experimental design studies of programs that focus on this population of children, reach a moderate to high level of quality in implementing this type of literacy programming, and garner similarly high rates of participation and engagement would constitute an important addition to the body of knowledge on after-school program effectiveness.

The findings from this study suggest that quality and engagement are important for promoting positive outcomes across all subgroups of children. Higher-quality programming was consistently related to better reading performance outcomes, and children's sense of belonging was related to positive change on 10 of the 13 outcomes measured regarding their attitudes toward reading and attitudes toward and behavior in school.

Because the study does not have a comparison group, it is possible that motivational factors related to children's involvement in or sense of belonging to CORAL may be linked to the positive gains documented. Despite the lack of a comparison group, however, the findings point to important associations worth exploring in more depth via future research.

Final Thoughts

The CORAL initiative was launched in 1999 with the aim of increasing the odds of academic success for youth in low-income, poor-performing school districts in five cities in California. The demographics reflect many communities in California and in other states across the country: ethnically diverse children, over half designated English learners, with parents who wanted their children to succeed in school but reported that they themselves did not have the educational background to feel comfortable helping their children with academics.

The initiative's transition to a balanced literacy approach emerged amid a larger transition in the after-school field, in which practitioners and policymakers are reevaluating the role of the after-school hours and becoming more attuned to the importance of high-quality programming and engagement among participants. Consequently, the evaluation of CORAL provides important guidance from a programmatic standpoint and from a public policy perspective. An understanding of the ways in which CORAL has engaged children in quality programming, and the relationship of those factors to academic outcomes, has drawn further attention to the potential role for after-school programs in the ongoing drive to improve children's academic achievement. And, increasingly, as researchers identify and examine effective practices for after-school programs, studies such as this one will be needed to determine if programs can equally benefit children, regardless of their differences in cultural, language and educational backgrounds.

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- ²⁵ Jim Cummins. "Reading and the Bilingual Student: Fact and Friction." In Garcia, 2003.
- ²⁶ Amy Arbreton, Julie Goldsmith and Jessica Sheldon, *Launching Literacy in After-School Programs: Early Lessons from the CORAL Initiative*. Philadelphia: Public/Private Ventures, 2005.
- ²⁷ With the exception of English learner status and CST-ELA proficiency scores, the data for this table were taken from the cities' enrollment database for 2004–2005, the first year of the evaluation. English learner status and CST scores were determined from 2004–2005 school records data received from Pasadena Unified, Fresno Unified, Long Beach Unified, Sacramento City Unified, North Sacramento, San Jose Unified and Franklin-McKinley Unified school districts, and Sherman Oaks school. The number of CORAL participants for whom information is available on English language designation and CST scores is lower than the total number of enrolled CORAL youth because school records information was not received for all participating youth. School districts provided English learner designation in more cases than CST information, possibly due to youth transience where CST scores did not follow children to new districts. The numbers of youth for whom information was received on English learner designation are: 1,507 (Fresno), 653 (Long Beach), 373 (San Jose), 514 (Sacramento), 458 (Pasadena) and 3,505 (total). The CST data are from the same districts with the following number of students: 967 (Fresno), 382 (Long Beach), 235 (San Jose), 314 (Sacramento), 304 (Pasadena) and 2,202 (total).
- ²⁸ On the enrollment forms, indicating race/ethnicity was optional. Overall, 8 percent of parents did not report their child's race. That percentage varied across sites, as follows: Fresno, 1 percent; Long Beach, 10 percent; San Jose, 7 percent; Sacramento, 24 percent; and Pasadena, 9 percent. These children were excluded from the calculations reported in Table 2.
- ²⁹ Teachers completed ratings forms for CORAL participants in February 2005.
- ³⁰ See Ann Duffett et al. *All Work and No Play? Listening to What Kids and Parents Really Want From Out-of-School Time*. The Wallace Foundation and Public Agenda, 2004. Among the findings was that low-income and minority parents were much more likely than higher income parents to want programs that emphasize academics for their children. http://www.publicagenda.org/research/research_reports_details.cfm?list=2.
- ³¹ Robert Halpern. *Critical Issues in After-School Programming*. Chicago: Monographs of the Herr Research Center for Children and Social Policy, 2006, p. 5.
- ³² See Halpern, 2006, and Spielberger and Halpern, 2002, on the focus in school-day instruction on basic skills and mastering tests.
- ³³ See Arbreton, Goldsmith and Sheldon, 2005, p. 9, for more details on the YET and Kidzlit models.
- ³⁴ In the second year of implementing literacy instruction, 90 minutes was the norm; but there was greater variation in the first year, with time for literacy activities ranging from 60 to 90 minutes.
- ³⁵ Twenty of the sites were the same each year. Three sites were dropped because the lead agencies were no longer providing CORAL programming; one site was added because children from a site that was dropped were moving to that CORAL site along with the site's coordinator. There were fewer groups to observe in Year Two because of a combination of factors, including fewer youth in those grade levels and slightly larger group sizes.
- ³⁶ The specific dimensions measured under "instructional quality" include: 1) staff are present and explain information clearly, 2) staff are prepared and well organized, 3) staff use motivating strategies and behaviors to engage youth in activity, and 4) staff provide challenging learning opportunities throughout the session.
- ³⁷ For a more detailed analysis of the program improvement process utilized by the CORAL cities, see Sheldon and Hopkins, 2007. The interim evaluation report on CORAL also provides more detail on each of these implementation factors as they related to program quality in the first year of the initiative: see Arbreton, Goldsmith and Sheldon, 2005, *Launching Literacy in After-School Programs: Early Lessons from the CORAL Initiative*.
- ³⁸ Heather B. Weiss, Priscilla M. Little and Suzanne Bouffard. "More Than Just Being There: Balancing the Participation Equation." In Weiss, Little and Bouffard, 2005.

- ³⁹ See, for example, Huang et al., 2000; B.M. Miller. *Critical Hours: Afterschool Programs and Educational Success*. Brookline, MA: Miller Midzik Research Associates for the Nellie Mae Education Foundation, 2003. Available at <http://www.nmedfdn.org/CriticalHours.htm>; and S.P. Klein and R. Bolus. *Improvements in Math and Reading Scores of Students Who Did and Did Not Participate in the Foundations After School Enrichment Program During the 2001–2002 School Year*. Santa Monica: Gansk and Associates, 2003.
- ⁴⁰ Weiss, Little and Bouffard, 2005.
- ⁴¹ U.S. Department of Education, Office of the Under Secretary, 2002.
- ⁴² Durlak and Weissberg, 2007.
- ⁴³ The programs in the meta-analysis included drop-in programs and programs for older teens, which may account to some extent for the lower rates of attendance.
- ⁴⁴ San Jose offered homework help less frequently than the other CORAL cities, so its attendance figures for that activity are much lower.
- ⁴⁵ See Huang et al., 2000; Elizabeth R. Reisner et al. *Building Quality, Scale, and Effectiveness in After-School Programs: Summary Report of the TASC Evaluation*. Policy Studies Associates, Inc., 2004; and Deborah Lowe Vandell et al. *The Study of Promising After-School Programs: Examination of Longer Term Outcomes After Two Years of Program Experiences*. Madison, WI: Wisconsin Center for Education Research, 2006.
- ⁴⁶ The percentage reported takes into account sites that were no longer participating in the next year of the evaluation.
- ⁴⁷ These analyses are based on OLS regressions with number of semesters as the outcome of interest. These analyses are presented in more detail in Appendix B. Only one predictor of retention was found: children who, in Fall 2004, reported a greater frequency of going to school without their homework completed were more likely to attend a greater number of semesters of CORAL.
- ⁴⁸ The proportion of children who attended fewer than four semesters (37 percent) is less than the proportion of parents who indicated their children had stopped attending CORAL (41 percent) because children were counted as attending four semesters if they attended during the second half of the 2005–2006 school year, but they may not have attended up until the end of the school year (and many of the parents were surveyed close to the end of the school year).
- ⁴⁹ The California Department of Education assigns these categories based on specified ranges of scores on the test. While it does not currently define the categories precisely, a May 2007 California Board of Education document (accessed July 18, 2006 at www.cde.ca.gov/be/ag/ag/yr07/documents/may07item9gr2plda.doc) offers a rough translation of four of the categories: “advanced”—students demonstrate comprehensive or superior mastery in understanding the basic features of reading; “proficient”—mastery or solid mastery; “basic”—limited or partial mastery; “below basic”—serious lack of mastery.
- ⁵⁰ Standardized test scores are gathered because they are of interest to funders and policymakers; however, the timing of administration (once yearly in the Spring) does not necessarily match the needs of the evaluation or of programs interested in more readily learning about outcomes. In addition, obtaining test scores from school districts can take many months or it can be challenging to access when school systems do not have the scores in a readily transmittable format. Thus, P/PV also included an individually administered reading assessment (IRI) given to the CORAL sample in Fall and Spring of each year of the evaluation. The two assessments were significantly correlated, though not completely in correspondence with one another for the children in the study. Correlations between the Spring 2005 CST-ELA and Spring 2005 IRI were .65; and correlations between the Spring 2006 CST-IRI and Spring 2006 IRI were .59.
- ⁵¹ As noted in Chapter 1, programs receiving Proposition 49 monies must track changes in program participation and in-school attendance. Tracking CST as an outcome area is one option for programs to choose among a set of outcomes.
- ⁵² Results of paired t-tests indicated that “liking reading” and “liking school” were significantly lower from Fall 2004 to Spring 2006 ($p < .001$ for liking school and $p < .05$ for liking reading). How often youth missed or cut school was marginally lower ($p < .10$). How often they got in trouble at school was marginally higher ($p < .10$).
- ⁵³ Cummins, 2003.
- ⁵⁴ Quality was also examined as related to changes on the 13 measures included in the survey of youth’s attitudes toward reading as well as attitudes and behaviors in school. While the IRI and CST scores were assessed at points before and after the 2004–2005 and 2005–2006 school years—allowing researchers to relate the observed quality of programming within each year of the evaluation to changes in performance outcomes over that same one-school-year period—the surveys were gathered at only two points in time, Fall 2004 and Spring 2006, making it challenging to link quality to survey outcomes. To do so, researchers used an average of the “overall lesson rating” across the two years in the analyses. These analyses revealed no significant relationships between quality of the literacy programming across the two years and changes in the 13 attitudes and behaviors reported in Table 12. Because the evaluation emphasized academic achievement, observations

focused on primarily the literacy activities in which children participated. Further, within those observations, researchers focused on the literacy strategies and explored fewer strategies that might be more likely to relate to changes in attitudes and behaviors. It is likely that unmeasured aspects of program quality might have contributed to positive changes in children's outcomes.

⁵⁵ These results are based on analyses using Hierarchical Linear Modeling, described in more detail in Appendix C.

⁵⁶ Bartko, 2005.

⁵⁷ The actual percentage here (73 percent) is slightly greater than the percentage reported in Chapter 5 (71 percent) due to the difference in population. The 73 percent refers to the sample of children for whom researchers had two surveys, as well as school records information (e.g., English learner status) and also the most accurate data on the number of semesters attended. The percentage reported in Chapter 5 is for all youth surveyed in Spring 2006.

⁵⁸ These analyses assess change from Fall 2004 to Spring 2006 in each outcome, using regression analyses. The regression analyses allow us to measure change over time in each outcome of interest (e.g., liking reading, comfort in reading ability, reading level, etc.) by taking into account children's Fall 2004 scores or ratings on the outcome of interest. The regression analyses also allow us to account for differences in the outcomes that may be related to the child's English learner status, gender, reading level as assessed by the IRI in Fall 2004, grade level in school, ethnicity and a variable that measured the number of stressful events in the last year. Using these regression analyses, we can understand the extent to which youth's sense of belonging to CORAL (assessed in Spring 2006) and number of semesters they participated in CORAL (out of four possible semesters between Fall 2004 and Spring 2006) contribute to changes in outcomes, over and above what might be attributed to the other factors, such as reading levels and demographic variables noted above. In conducting these analyses, we also utilized a statistical technique to account for the fact that children are "nested" within sites and may share factors common to that site that could affect whether or not they show change on the outcome. Results of these analyses are presented in Appendix C.

⁵⁹ Cummins, 2003.

⁶⁰ Ordinary Least Squares (OLS) regression was used to predict children's sense of belonging, measured at Spring 2006, taking into account the children's demographic differences (e.g., ethnicity, gender, grade level), their English learner status, their independent reading level, the number of semesters they participated between Fall 2004 and Spring 2006, and the number of stressful events in the last year, along with the following perceptions of CORAL from the Fall 2004 survey: safety, supportive adults, interesting activities, staff that make sure children treat each other with respect, the extent to which children at CORAL are bullies and the extent to which there are positive peers at CORAL.

⁶¹ Given that English learners by definition are not yet proficient in English, it is not surprising that many of the English learners were also far behind grade level in reading; however, the groups of students falling into these two categories did not overlap completely.

⁶² These focus groups were conducted during Year One of the evaluation and are described in more detail in the interim evaluation report. See Arbreton, Goldsmith and Sheldon, 2005.

⁶³ Lind et al. *The Costs of Out-Of-School-Time Programs: A Review of the Available Evidence*. Philadelphia: Public/Private Ventures, 2006.

⁶⁴ At the time of the cost survey, one of the CORAL cities was undergoing a transition in staffing and structure, and was not in a position to participate in the cost analysis.

⁶⁵ At the end of the research period, all of the CORAL cities were hoping to build on this model of public funding through ASES funds, which were significantly expanded by the implementation of Proposition 49 in the 2006–2007 school year. In collaboration with partner school districts, the cities applied for ASES funding in Fall 2006.

⁶⁶ CORAL programs in the fourth city were based in schools that were not eligible for SES funds in 2005–2006. After-school programs can qualify for SES funds only if they serve low-income children from Title I schools that fail to meet state standards for adequate yearly progress for at least three years. Even though not eligible in 2005–2006, in this city, CORAL is an approved SES provider and may draw on such funds if CORAL programs are located in eligible schools in the future.

⁶⁷ In order to obtain SES funding, programs first had to submit an application and be approved as an SES provider, and then have eligible parents choose CORAL among all available providers. Among these three cities, one was approved as an SES provider at the end of the research period and had not yet enrolled any participants designated for SES funding. The other two cities served small numbers of SES-enrolled children (between 20 and 60 per city), in one city providing them with regular CORAL programming and in the other with one-to-one literacy tutoring. The small amount of SES funding for these two cities was not reported in the cost surveys.

- ⁶⁸ All cities were asked to provide their own estimate of the financial equivalent of their in-kind donations. These calculations exclude any minor program donations as well as the price of donated school space. In addition, one city that received donations of books and supplies was not able to calculate a cash equivalent for these donations.
- ⁶⁹ The unit cost calculation is based on the actual number of children that attend CORAL on an average day; absentees are not considered in this calculation. It was calculated by dividing each city's expenses in 2005–2006 by the average number of days the program was open and the average number of youth who attended each day that year. An alternate approach would be to base unit cost on the cities' reported capacities, rather than attendance. This approach results in a unit cost of \$19.78.
- ⁷⁰ Lind et al., 2006, list three main methodological differences in calculating the costs of after-school programs that, in turn, may contribute to differences in reported costs for programs that might otherwise have the same unit costs: variations in how costs are measured (for example, using grant amounts as opposed to actual expenses), whether and how in-kind resources are accounted for, and whether key cost elements such as start-up and system-building costs are included.
- ⁷¹ Nancy Wolff, Thomas W. Helminiak and Jacob Kraemer. "Getting the Cost Right in Cost-Effectiveness Analyses." *American Journal of Psychiatry*. 154:6, June 1997, 736–743.
- ⁷² A 2000 study of about 60 after-school programs for low-income youth in Chicago, Boston and Seattle found that the average weekly cost for a five-day-per-week program was \$80, or about \$16 per day (Robert Halpern, Julie Spielberger and Sylvan Robb. *Evaluation of the MOST (Making the Most of Out-of-School Time) Initiative: Final Report and Summary of Findings*. Chicago: Chapin Hall Center for Children, 2000). A 2001 report on San Francisco Beacons—programs that are located primarily in middle schools and provide a mix of educational and youth development activities—calculated average unit cost at \$27 (Walker and Arbreton, 2004). Finally, programs included in the 2002 Extended-Service Schools study varied considerably in cost, but tended to provide a mix of homework help, tutoring and enrichment activities to elementary or middle school youth, for an average of \$15 per day (Grossman et al., 2002).
- ⁷³ See Afterschool Alliance, 2007.
- ⁷⁴ The cost components used mirror those permissible for administration and site costs in California's ASES legislation. In addition, P/PV figures include both cash expenditures and the monetary equivalent of in-kind donations of staff, books and snacks.
- ⁷⁵ Rachel Emma Silverman and Sally Beatty. "Save the Children (But Pay the Bills, Too)." *Wall Street Journal*. December 26, 2006, page D1.
- ⁷⁶ See Sheldon and Hopkins, 2007, for more information on the relationships between such investments and quality improvement.
- ⁷⁷ Durlak and Weissberg, 2007.
- ⁷⁸ Durlak and Weissberg, 2007.
- ⁷⁹ This variable was not a consideration in the 73 studies reviewed by Durlak and Weissberg, and few other studies have considered how after-school programs serve this population of youth.
- ⁸⁰ Gee, 1999.
- ⁸¹ A separate report based on lessons from the CORAL initiative focuses on the specific strategies that the CORAL cities used to promote higher quality literacy programming. See Jessica Sheldon and Leigh Hopkins. *Supporting Success: Why and How to Improve Quality in After-School Programs*. Philadelphia: Public/Private Ventures, 2008. Launching Literacy also provides more detail on each of these implementation factors as they related to program quality in the first year of the initiative.
- ⁸² U.S. Department of Education, Office of the Under Secretary, 2002.
- ⁸³ Durlak and Weissberg, 2007. The programs in the review included drop-in programs and programs for older teens, which may account to some extent for the lower rates of attendance.
- ⁸⁴ At the time of the cost survey, one of the CORAL cities was undergoing a transition in staffing and structure, and was not in a position to participate in the cost analysis.
- ⁸⁵ For costs of other after-school programs, see Halpern, 2000; Walker and Arbreton, 2004; and Grossman et al., 2002. For information on support offered by public funders, see "21st Century Community Learning Centers Providing Afterschool Supports to Communities Nationwide." Afterschool Alliance. Retrieved February 7, 2007, <http://www.afterschoolalliance.org/21stcccl.pdf>; and the California Department of Education description of CA Senate Bill 638, at <http://www.cde.ca.gov/ls/ba/as/ases06fundingfaq.asp>. Retrieved August 24, 2007.
- ⁸⁶ For further discussion on program improvement, see Sheldon and Hopkins, 2007.

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Appendices

APPENDIX A: METHODOLOGY AND DATA COLLECTION

P/PV's evaluation of CORAL over the 2004–2005 and 2005–2006 school years involved several components: 1) a baseline youth survey administered in Fall 2004 to a sample of third- and fourth-grade CORAL participants, with a follow-up survey administered in Spring 2006 when the children were in fourth- and fifth-grades; 2) an Informal Reading Inventory administered one-on-one in the Fall and Spring of each evaluation year to the same sample of surveyed children, and also to an additional group of fourth- and fifth-grade children in the second year of the study; 3) systematic observations of CORAL programming for those children in the intensive study sample over the course of each school year; 4) a survey of the parents of those children in Year Two of the evaluation; 5) a survey administered to all CORAL staff; 6) a management information system for tracking enrollment and attendance completed by all CORAL sites; 7) standardized test scores gathered from the school districts for all CORAL participants with permission to be in the study; and 8) site visit interviews with staff and focus groups with parents. This appendix describes each research element in detail.

The staff survey and management information system data collection were implemented at all CORAL sites across the state. In order to collect sufficient data to gain an in-depth understanding of activity quality and outcomes questions, however, much of the research focused on a sample of four or five intensive research sites in each CORAL city (each of the CORAL cities hosted four to twelve sites each year) for a total of 23 intensive research sites in Year One and 21 in Year Two. Within these intensive research sites, the evaluation focused on third- and fourth-graders in Year One and fourth- and fifth-graders in Year Two.

Youth Survey

P/PV contracted with the firm Population Research Systems (PRS) to administer the Youth Survey as well as the Independent Reading Inventory (see below). PRS researchers were trained to administer the survey consistently across the state. For the third-graders, researchers read the survey questions out loud to individual youth and recorded their answers. For the fourth- and fifth-graders, researchers read the questions out loud to small groups of four or five youth, and youth recorded their own answers. The survey lasted approximately 20 minutes, and youth received small gifts for their participation.

At the time the survey was administered, October to December 2004, P/PV had received completed permission forms from parents of 762 CORAL third- and fourth-graders. Of those, 738 parents (97 percent) agreed to allow their child to participate in the evaluation. Of those children with permission, 635 were randomly selected to be included in the youth survey and reading assessment cohort (approximately 125 per city). The final cohort of children surveyed in Year One included 515 youth: 280 third-graders and 235 fourth-graders.

The survey was administered to the same group of children in Spring 2006, and children were contacted and asked to complete the survey whether or not they remained in the CORAL program, with the following exception: Of the 515 children in the initial survey cohort, 67 were not followed because three sites no longer ran CORAL programs in Year Two of the evaluation, bringing the total we attempted to follow to 448. Of those 448 children, 379 (85 percent) completed follow-up surveys in Spring 2006. Data reported in Chapter 5 are from this sample of children. For a smaller sample of children who have both Time 1 and Time 2 surveys, (the number ranges from just over 300 to just over 350, depending on the analysis), reliable enrollment and attendance information is also available. This group is the focus of the analysis linking engagement and participation to outcomes.

The survey questions covered key aspects of program experience and developmental outcomes of interest in this study, including sense of safety, social support from adults and peers, and interesting activities. Additionally, several questions addressed youth's attitudes toward reading and school, including their enjoyment of reading, sense of efficacy as readers, and effort and interest in school. A number of constructs were created based on a series of questions asked on the youth survey; these constructs were adapted from previous studies of youth-serving organizations. For example, adult support, sense of belonging, and interest in activities were adapted from Gambone and Arbreton, 1997. Scales for reading efficacy and liking reading were created by the Developmental Studies Center, and used in evaluations of Kidzlit. The constructs include:

- **CORAL Adult Support ($\alpha=.80$)** — four statements about the number of adults at CORAL who are available: “How many adults [at CORAL] pay attention to what’s going on in your life?”
- **CORAL Belonging ($\alpha=.79$)** — three statements that assess whether the youth feels that he or she belongs and is engaged: “I feel like I belong here [at CORAL].”
- **CORAL Interesting Activities ($\alpha=.66$)** — four statements about whether the youth perceives the activities as interesting and new: “I get a chance to do a lot of new things.”
- **CORAL Positive Peers ($\alpha=.70$)** — three statements about whether the youth has friends at CORAL: “I get to know other kids really well here [at CORAL].”
- **School Liking ($\alpha=.77$)** — three statements that focus on how youth feel about school: “In general, I like school a lot.”
- **Reading Efficacy ($\alpha=.73$)** — five statements about how comfortable youth are with their ability to read: “I’m very good at reading.” and “Reading is easy for me.”
- **Reading Liking ($\alpha=.83$)** — six statements that examine the extent to which the youth enjoys reading: “Reading is one of my favorite things to do.”

The response set for the statements that comprise CORAL Adult Support was 0, signifying “no adults,” to 5, signifying “5 or more adults at CORAL.” The response set for the statements that comprise the other constructs was a five-point Likert-type rating scale, from 1, indicating “strongly disagree,” to 5, indicating “strongly agree.”

Informal Reading Inventory

In Fall 2004 (mid-October to mid-December) and Spring 2005 (mid-April to mid-May), PRS researchers administered the Jerry L. Johns Basic Reading Inventory (an informal reading inventory or IRI) to the sample of third- and fourth-graders at CORAL research sites who had also completed youth surveys (plus five children who had not completed the survey). The inventory is a means for assessing reading-level gains over time. The assessment has three components. First, the children were asked to read aloud from graded word lists as researchers recorded how many words were read accurately. Second, the children were given a series of short passages to read aloud. While each child read, researchers took notes on “significant” miscues: that is, errors that seriously altered the passage or sentence meaning, such as skipped words. Finally, after each passage, youth were asked to answer between five and ten comprehension questions based on what they had just read as researchers recorded their responses. The assessment took approximately 20 to 30 minutes per child to complete and score.

PRS researchers met one-on-one with youth to administer the IRI. Immediately following administration of the IRI, PRS researchers assigned an “independent reading level” to each child based on her or his accuracy in reading the word lists and passages, and in answering the comprehension questions. The independent reading level is an assessment of what the child can read fluently, accurately and with 99 percent comprehension, without any assistance; the reading level is assigned as a grade-level equivalent (for example, reading at first-grade level, second-grade level, etc.). For greater consistency, all IRIs were also reviewed by P/PV researchers, who double-checked the reading-level assignments based on the children’s responses. The IRI administrators were blind to any information about each child’s in-school reading levels and test scores at both baseline and follow up so as not to bias either their interactions with the children or the reading levels they assigned the children for evaluation purposes. In some cases, this meant that a child’s reading-level assignment was higher or lower than either a teacher or other assessment might place it. Situations where children were less or more familiar with certain reading passages or particularly comfortable or uncomfortable with an administrator may have factored into these differences.

In Fall 2004, IRIs were administered to 520 youth: 281 third-graders and 239 fourth-graders. In Spring 2005 — four to six months after the initial administration — IRIs were administered to 383 youth still attending CORAL, for a follow-up rate of 74 percent. These are the subjects for the analyses linking quality to reading gains Year One.

In Fall 2005, PRS researchers reassessed 353 of the 448 (79 percent) who initially completed IRIs in Fall 2004 and whose sites were still providing CORAL programming; 180 fourth- and fifth-graders were also added to the IRI sample in Fall 2005, for a total of 533 IRI assessments (children were added to the sample for the purpose of having a larger number of children for linking quality observations — described in the next section — to IRI gains. These 180 children with IRI assessments, however, are not described by the survey data). PRS followed up with 379 of the initial cohort of

448 (85 percent) in Spring 2006 and 142 (79 percent) of the added fourth- and fifth-graders, for a total of 521 assessments in Spring 2006. From Fall 2005 to Spring 2006 (Year Two), 319 of 448 children who had IRI and surveys also had assessments at both points in time. For the analyses linking quality to reading gains in Year Two, the sample size consists of 368 youth who have IRI assessments in Fall 2005 and Spring 2006 and who also have data from observations of the group they were part of in that year.

Activity Observations

In order to learn about the types of activities offered by the CORAL programs, and to evaluate the quality of these programs, P/PV undertook systematic observations of CORAL activities between Fall 2004 and Spring 2005 and again between Fall 2005 and Spring 2006. P/PV focused these observations at the intensive research sites on the balanced literacy activities offered to third- and fourth-graders during Year One of the evaluation and fourth- and fifth-graders in Year Two. In Year One, P/PV observed 56 groups of children in balanced literacy activities across the state (23 sites). Each group was observed between two and four times over the course of the year, with most observed three times (48 of 56, or 86 percent). In Year Two, P/PV observed 43 groups of children in balanced literacy activities across the state (21 sites). Each group was observed at least three times.

The observations were structured to measure ten dimensions of quality, falling within the two broad areas of general classroom practices (support and instruction) and balanced literacy strategies. An observation tool was developed for the project that allowed researchers to assign numerical scores of 1 through 5 to each dimension. Activities that scored 1 on specific dimensions were characterized by extremely negative behaviors and little to no positive strategies for working with youth. Activities that scored 5 on specific dimensions represented outstanding examples of those dimensions in the field, characterized by the consistent use of strong strategies. A description of the dimensions follows.

Classroom Practices

The observed dimensions of quality include:

- **Adult Support:** This dimension assesses staff's efforts to support youth, help all youth succeed at the activity and develop an emotional relationship with youth. Did adults encourage youth who were struggling? Express an interest in youth's thoughts and ideas? Display warmth toward youth? Conversely, researchers also observed whether the adults were discouraging of young people's questions or efforts, used sarcasm or anger, or interacted with young people in an unfriendly way.
- **Instructional Strategies:** This dimension includes a variety of strategies for successful instruction, such as clear communication, organization and preparation, motivating youth to participate and challenging youth beyond their present skill levels. Did staff give clear and accurate directions to youth? Did they keep children focused on the activity's goals? Did they present topics in a logical sequence? Did they demonstrate enthusiasm for the activity and convey its value?
- **Group Management:** This dimension deals with staff's ability to manage youth's behavior during the activity in a way that is appropriate for the age of the youth involved and the type of activity. Staff's discipline and management should be appropriate to the activity, be given in a supportive yet firm manner, and maintain order without inhibiting youth. In examples of strong group management, staff displays a firm but warm management style. This can be exhibited in a number of ways, but in all cases the adults are able to redirect the youth and win their cooperation without yelling or resorting to critical, punitive or negative discipline tactics. If behavioral issues do occur, staff handle them calmly and resolve them quickly and successfully. The staff may be strict with youth, but are able to correct their behavior while maintaining a positive regard and respect for the youth.
- **Connection Making:** This dimension refers to the extent to which staff drew connections between the topics covered during the activity and youth's own experiences and interests. Staff could use multiple methods to create connections between youth and lesson topics — for example, having

youth participate in role-playing games based on a story, or leading youth in a group discussion relating the story to youth's experiences. Staff could also draw connections to youth's neighborhoods, to their schools, to their cultures, or to media or pop culture. Staff who display strength in this dimension offer multiple opportunities for youth to be personally engaged in the material.

Balanced Literacy Strategies

The observed dimensions of quality include:

- **Read Aloud:** A good read aloud consists of much more than an adult simply reading from a text. It should be an interactive process that engages youth. Excellent read alouds begin with the adult introducing the text, perhaps by giving background information or making a connection between the book's content and the youth's experiences. During the reading, the adult uses engaging techniques, such as varying his/her tone of voice, encouraging youth to read along during repetitive lines or choruses, and pausing to ask questions. In strong read alouds, staff generally make active efforts to ensure that youth are engaged and following along with the text.
- **Book Discussion:** This construct assesses the staff's ability to engage youth in a discussion of the text they have read or are about to read aloud. For example, the staff may ask youth to think about why a character made a certain decision, or they may ask youth to think about a time they were in a similar situation. A successful discussion is organized and keeps all youth engaged. Staff should ask clear questions to guide the discussion and should encourage all youth to participate. An activity would score low on this construct if the staff did not attempt to engage youth, if the discussion seemed very slow-paced or if the discussion appeared unrelated to the book read.
- **Writing:** Writing in CORAL can take a variety of formats, including youth writing stories and letters, or adding captions to drawings. An outstanding writing activity would give youth flexibility so that all can work at levels appropriate to their skills and abilities. It would also provide youth with the opportunity to write about topics relevant to

a book they have read, their personal experiences or current events. Staff who rate highly on this construct provide youth with clear instructions and guidance for the writing exercise, including modeling the activity if appropriate. Staff should also interact with youth throughout the exercise, providing one-on-one instruction to multiple youth.

- **Independent Reading:** As assessed here, independent reading involves much more than youth simply reading silently to themselves. The first step in a successful process is for youth to retrieve books in an organized, efficient manner. Youth should spend the majority of the time in this activity focused on the reading, with minimal distractions (e.g., getting up to choose new books, talking to a friend, etc.). A high rating on this construct indicates that staff are very involved with youth during independent reading. Staff should talk with youth individually or in small groups about what they are reading. This is also an opportunity for staff to coach youth on specific literacy problems. During this activity, the instructor might walk around the room to talk with youth individually or call them over to a table to work one-on-one. If the staff are passive during this activity or leave the room, the activity would score low on this construct. The observer also notes the number of minutes that the youth spent reading.
- **Skill Development Activities:** This construct is used to assess games or activities that teach youth literacy skills in a fun manner. Especially in the after-school context, these are an important way to reinforce literacy skills while keeping youth engaged and interested. A high rating on this construct indicates that staff are making efforts to engage youth in the activity and also clearly providing instruction in specific literacy skills.
- **Vocabulary:** This construct assesses the extent to which instructors included in their lessons activities designed to increase or reinforce youth's vocabulary. Instructors could help youth build their vocabulary in many ways: taking small steps such as writing a word on the board, pausing in a read aloud to define a new word, or pointing youth to a word posted on the wall. Instructors might devote more time to this purpose with activities like vocabulary games. A low score on this construct

would indicate that the instructor paid little to no attention to vocabulary, such as not mentioning any new words or not checking to see if youth understand the words in a text.

Parent Survey

In Spring 2006, parents of children who had completed IRIs at any time during the evaluation period (with the exception of the children from the sites that were no longer part of CORAL in the 2005–2006 school year) were contacted and asked to complete a survey, even if their children no longer participated in CORAL. Surveys were received from 501 of 610 (82 percent) parents of youth for whom researchers also gathered reading assessment (IRI) data at some point in the evaluation period. The survey consisted of questions asking parents why they enrolled their children in CORAL, what their children did before enrollment in CORAL, the children's experiences at CORAL, if their children had left CORAL why they had left, and demographic characteristics of the family (such as parent education levels and primary language of the household).

Staff Survey

In February and March 2005, P/PV sent a two-page survey to all CORAL staff, including team leaders, site coordinators, paraprofessionals, volunteers, educational liaisons, city directors, literacy directors, enrichment providers and other staff who work closely with CORAL. These surveys were mailed to operations directors and site coordinators for distribution. The surveys were returned to P/PV by mail in return-addressed, stamped envelopes provided by P/PV. The survey contained 15 brief questions about staff's educational background, experience, training, time with CORAL and responsibilities with CORAL. In March 2005, P/PV sent follow-up emails or letters to staff who had not yet returned surveys, in an attempt to reach high response rates. Overall, staff surveys were mailed to 564 individuals, and were returned by 412 staff members, for a response rate of 73 percent. Of those who returned the survey, 179 were identified as the direct service providers, referred to as team leaders in Chapter 3 of this report.

Enrollment and Attendance Data

P/PV worked closely with the CORAL cities to develop a computer-based management information system to record participants' enrollment and attendance information. Based on CORAL city directors' input on the type of information they wanted to collect, as well as research needs for particular data, P/PV developed a computer database, distributed this database to all CORAL sites, and trained CORAL staff on how to collect and enter data.

The database provided fields for staff to enter several types of information that they collected when youth enrolled, as well as daily attendance. The enrollment information included each youth's name, grade, school, contact information and birth date. Attendance fields could be updated every day, indicating whether each youth was present or absent, the activities in which he or she participated (coded into literacy, homework help, academic support, enrichment, recreation or other categories), and the youth's time in and time out of the program.

CORAL staff were expected to continually update this database with new and corrected information, and submit the files to P/PV on a monthly basis. Each month, P/PV researchers reviewed the data files and indicated to CORAL staff where data were missing or incomplete. P/PV researchers also provided technical support for CORAL staff when they had questions about data entry or the computer database.

Appendix B describes how P/PV created each of the attendance data points.

Research Site Visits

The site visits included two major activities, described below.

Staff Interviews

P/PV researchers conducted intensive research visits to four of the five CORAL cities in February and March 2005. The fifth city received a modified visit, as it was in transition during the scheduled visit. All five cities were visited again in Spring 2006. During these visits, researchers interviewed various CORAL staff members and stakeholders, including team leaders, city-level directors, board members, and principals of the school sites. The purpose of these interviews was to document information on various topics, including staffing structures, staff training, participant recruitment and targeting strategies, lesson and activity planning, goals for enrichment activities, obstacles to implementation of the balanced literacy model, relationships with schools and other partners, and plans or goals for the future.

Focus Groups with Parents

During the week-long site visits to each CORAL city in Spring 2005, P/PV researchers also conducted focus groups with a sample of CORAL parents. These focus groups were held at each of the intensive research sites in the CORAL cities, for a total of 19 focus groups. Approximately 170 Spanish-, Hmong- and English-speaking parents were interviewed across these 19 groups. Parents were asked three primary questions: Why did you choose to send your children to CORAL? How, if anything, have your children benefited by participating in CORAL? What is the quality of your interactions with CORAL staff? Each focus group lasted approximately 45 minutes and was audio-recorded.

APPENDIX B: DATA ANALYSIS FOR CHAPTER 5

This appendix describes the analyses that were conducted to: 1) determine CORAL participants' attendance patterns and rates, and 2) understand the factors that contributed to CORAL participants' attendance and engagement in the program.

Participation Analyses

All analyses for this report were completed by exporting the enrollment and attendance data from each CORAL city's management information system database into spreadsheets, which were then imported as statistical analysis software program files. The enrollment information, reported in Table 2 in Chapter 2, reflects enrollment for all CORAL youth across all 37 CORAL sites for the 2004–2005 school year. In contrast, the Year Two attendance information reported in Chapter 5 was calculated across the 21 intensive research sites for intensive study sample participants only (those with IRI assessments at two points in time and observation data) as they were the focus of the most in-depth analysis.

The timeframe for calculating attendance in Year Two covers the period from August 31, 2005, through June 8, 2006 (when most sites ended their programming for this year). Only youth who were marked present at least once over the time period of interest were included in the attendance analyses.

For each programming day, CORAL staff recorded in the management information system database whether youth were present or absent and, if present, their "time in," "time out" and the activities in which they participated. We took the following approach to calculating the average numbers of hours children attended CORAL: the analysis subtracted the recorded "time in" from the recorded "time out" for each day an individual youth attended, summed the total number of daily minutes attended across all the days that each child was marked present, divided the total number of minutes by the total number of days the child was marked present, and then calculated an average number of minutes attended per day across all the CORAL children in attendance.

The average number of days per week attended and average number of literacy days per week attended were calculated similarly. First, the analysis summed the total number of days each child attended and divided that total by the total number of weeks the child attended. Then we calculated an average days-per-week figure by averaging across all the children in attendance. The average number of literacy days per week analysis followed the same steps, but it applied only to days when children were marked as having attended a literacy activity.

The average attendance rate took into account the total number of days children attended CORAL, divided by the possible days the CORAL program was open. This rate provided an average across all the children in attendance.

Predicting Participation and Belonging

We conducted analyses examining predictors of the number of semesters children attended and their sense of belonging to CORAL for two purposes. First, it was important to understand whether demographic variables, reading performance, or attitudes and behaviors (as of Fall 2004 when the evaluation began) helped to explain which children stayed in CORAL and which ones developed a strong sense of belonging. Second, it was important to include the factors that were related to participation and belonging (in particular the attitudes and behaviors variables) as controls in the analyses linking participation and engagement to change in the outcomes of interest.

Results of Ordinary Least Squares (OLS) regression using the children's Year One ratings of the outcomes of interest, their English learner status, and other demographic variables to predict number of semesters of attendance and sense of belonging revealed three significant predictors: how often the child has talked with an adult about something she/he read, how often the child has come to school without homework finished, and how often the child has missed school in the past thirty days (see Table B.1).

Table B.1. Predicting Number of Semesters of Participation in CORAL and Spring 2006 Sense of Belonging Based on Children's Fall 2004 Reading-Level and Reported Attitudes and Behaviors, Their Demographic Characteristics, and English Learner Status

	NUMBER OF SEMESTERS OF ATTENDANCE	SPRING 2006 SENSE OF BELONGING
Girl	.16	.20
English learner	-.04	-.04
Fall 2004 grade-level reading score	-.05	-.02
African American	.11	-.10
White	-.04	.06
Asian	-.11	.07
Multi-race	-.22	-.31
Other race	-.33+	.02
Grade 4	-.07	.06
Pays attention and concentrates in class	-.06	.11
Likes school	.04	.14
Comes to class without finishing homework	.10**	-.03
Felt unsafe at school in the last 30 days	-.05	-.05
Studied hard for a test in the last 30 days	.08	-.01
Got in trouble at school in the last 30 days	-.03	.07
Missed/cut whole day of school in the last 30 days	.05	-.14*
Wanted to go to school in the last 30 days	.06	.03
Likes reading	-.05	-.02
Talked with someone about something read in the last 4 weeks	-.01	.14**
Amount typically read for pleasure after school (1 = no time to 4 = more than an hour)	-.02	-.01
Comfort with ability to read (reading efficacy)	.07	.00
Sample size	298	298

These are unstandardized coefficients from OLS where the participation and engagement are modeled as a function of the youth's demographics (grade level, ethnicity and gender), English learner status, fall 2004 grade-level reading score, and fall 2004 ratings of attitudes and behaviors. Data are from youth surveys, IRI assessments, and site attendance information. The clustered nature of the sample (by site) is accounted for in the estimation of the covariance matrix. Excluded categories are Latino children, third-graders, English-proficient children and boys. (Fall 2004). + $p < .10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

APPENDIX C: DATA ANALYSIS FOR CHAPTER 6

This appendix describes the analyses conducted to determine the relationships between quality, participation, engagement and changes in children's reading performance, as well as changes in their attitudes and behaviors.

It is important to note that a smaller sample of children provided all the data points needed to conduct the analyses linking quality, participation and engagement to outcomes. (These data points include Fall and Spring IRI assessments, attendance data, and data from the observations that were conducted within a given year.) Therefore, in analyses presented in examination of the relationship of quality to outcomes, taking into account participation, the numbers in the sample in Year One are approximately 383 for IRI gains and 378 for positive outcomes on the CST-ELA. For Year Two, the numbers are 367 for IRI gains and 234 for positive outcomes on the CST-ELA (depending on the specific analysis of interest). For the analyses that explore the relationship of participation and engagement to outcomes over the Fall 2004 to Spring 2006 time period (using data from the Year One and Year Two surveys), the sample is approximately 305 (again, depending on the specific analysis).

Quality and Reading Performance

P/PV conducted a series of analyses to assess the extent to which the consistency and quality of the literacy strategies to which the children were exposed (i.e., the literacy profile; see Chapter 4) or other classroom practices (i.e., adult support, general instructional strategies, group management and connection making) were related to changes in reading performance over the course of a given year. All of these analyses controlled for demographic characteristics (i.e., gender, grade level, ethnicity, English learner status) and participation in literacy activities (i.e., number of days of exposure to literacy programming over the course of that year).

In all of the analyses involving the IRI, the variation in number of days between IRI assessments (which ranged from 126 to 231 days in Year One, and was correlated with reading gains) was also included as a control variable. The Fall IRI score was included in the analysis in order to measure the relationship of the other variables on change in IRI levels over time. The Hierarchical Linear Modeling (HLM) approach was used for the IRI reading gains analyses in order to account for the fact that groups of CORAL children were "nested" in the literacy groups under observation (for which quality and literacy profile ratings were available) such that all children in the groups had the same observational data rating. Logit analyses were used to examine whether quality was related to a positive outcome on the CST-ELA. The clustered nature of the sample is accounted for in the estimation of the covariance matrix.

The results of the Year One analyses predicting reading gains in the IRI are presented in Tables C.1, C.2 and C.3. Results of the analyses predicting a positive outcome on the CST-ELA are presented in Tables C.4, C.5 and C.6.

As discussed in Chapter 4, when P/PV created literacy profiles for the groups observed in Year Two, there was little variation (i.e., almost all groups were in Profile 3), so researchers lacked sufficient numbers of children across the literacy profiles to analyze change in relation to the literacy profile variable as done in Year One. Also in Year Two, observer ratings of the four main literacy strategies (read-alouds, book talk, writing and independent reading) were highly correlated with observer ratings of classroom practices (adult support, instructional quality, group management and connection making). To conduct analyses linking quality to outcomes in Year Two, P/PV constructed an "overall lesson rating" (alpha coefficient = .95), comprising the average ratings of the four main literacy strategies (each of which had greater variation than the literacy profile) and the average ratings of the support, instruction, group management and connection making ratings.

Table C.1. HLM Analysis Predicting Spring 2005 IRI Score Based on Literacy Profile, Participation and Participant Demographics

CATEGORIES	COEFFICIENTS
Girl	.15
Grade 4	.45**
Fall 2004 IRI score	.66***
English learner	-.02
African American	.02
White	-.39
Asian	-.27
Multi-race	.15
Other race	-.13
Number of days between IRIs	.01**
Days of literacy child attended between IRIs	0.00
Literacy profile rating	.20*

Excluded categories are Latino children, third-graders, English-proficient children and boys. N = 323. +p<.10, *p<.05, ** p<.01, ***p<.001.

Table C.2. HLM Analysis Predicting Spring 2005 IRI Scores Based on Observed Quality of Literacy Strategies

CATEGORIES	COEFFICIENTS
Girl	.22
Grade 4	.53**
Fall 2004 IRI score	.66***
English learner	-.05
African American	.04
White	-.30
Asian	-.40
Multi-race	.17
Other race	-.10
Number of days between IRIs	.01**
Days of literacy child attended between IRIs	0.00
Average read aloud rating	.08
Average book talk rating	.17
Average vocabulary rating	-.08
Average writing rating	.04
Average number of independent reading minutes	.03*

Excluded categories are Latino children, third-graders and boys. Literacy strategy ratings are on a scale from 1 = lowest to 5 = highest. Average number of independent reading minutes are actual minutes and range from 0 to 27, with a mean of 13.5. +p<.10, *p<.05, ** p<.01, ***p<.001.

Table C.3. HLM Analysis Predicting Spring 2005 IRI Scores Based on Observed Quality of Classroom Practices

CATEGORIES	COEFFICIENTS
Girl	.16
Grade 4	.46**
Fall 2004 IRI score	.67***
English learner	-.05
African American	-.01
White	-.32
Asian	-.33
Multi-race	.18
Other race	-.10
Number of days between IRIs	.01*
Days of literacy child attended between IRIs	0.00
Average classroom practices rating	.21

Excluded categories are Latino children, third-graders and boys. The Classroom practices scale comprises the following observation constructs: adult support, group management, instruction and connection making. The scale is based on ratings from 1 = low to 5 = high. N = 323. +p<.10, *p<.05, ** p<.01, ***p<.001.

Table C.4. Logit Analysis Predicting a Positive Outcome on CST-ELA (2004 to 2005) Based on Literacy Profile, Participation and Participant Demographics

CATEGORIES	ODDS RATIO
Girl	1.3
Grade 4	2.8**
English learner	.35***
African American	.78
White	1.1
Asian	1.8
Multi-race	1.3
Other race	1.5
Days of literacy child attended	1.0
Literacy profile rating	1.2

Excluded categories are Latino children, third-graders, English-proficient children and boys. N = 366. +p<.10, *p<.05, ** p<.01, ***p<.001.

Table C.5. Logit Analysis Predicting a Positive Outcome on CST-ELA (2004 to 2005) Based on Observed Quality of Literacy Strategies

CATEGORIES	ODDS RATIO
Girl	1.3
Grade 4	2.6**
English learner	.32***
African American	.70
White	1.1
Asian	2.2
Multi-race	1.5
Other race	1.4
Days of literacy child attended between IRIs	1.00
Average read aloud rating	1.3
Average book talk rating	.81
Average vocabulary rating	.83
Average writing rating	.63+
Average number of independent reading minutes	1.0

Excluded categories are Latino children, third-graders and boys. Ratings of literacy strategies are on a scale from 1 = lowest to 5 = highest. Average number of independent reading minutes are actual minutes and range from 0 to 27, with a mean of 13.5. N = 366. +p<.10, *p<.05, ** p<.01, ***p<.001.

Table C.6. Logit Analyses Predicting a Positive Outcome on CST-ELA (2004 to 2005) Based on Observed Quality of Classroom Practices

CATEGORIES	ODDS RATIO
Girl	1.3
Grade 4	2.8**
Fall 2004 IRI score	.67***
English learner	.36***
African American	.80
White	1.1
Asian	1.7
Multi-race	1.3
Other race	1.5
Number of days between IRIs	.01*
Days of literacy child attended between IRIs	1.00
Average classroom practices rating	1.3

Excluded categories are Latino children, third-graders and boys. The Classroom practices scale comprises the following observation constructs: adult support, group management, instruction and connection making. The scale is based on ratings from 1 = low, to 5 = high. N = 366. +p<.10, *p<.05, ** p<.01, ***p<.001.

**Table C.7. Logit Analysis Predicting a Positive Outcome on the CST-ELA (from 2005 to 2006)
Based on Overall Lesson Rating, Participation and Participant Demographics**

CATEGORIES	ODDS RATIO
Girl	1.33
Grade 5	.76
English learner	.49*
African American	1.8
White	.37
Asian	1.84
Multi-race	.53
Other race	.51
Days of literacy child attended between IRIs	1.00
Overall lesson rating	2.7*

Excluded categories are Latino children, fourth-graders, English-proficient children and boys. N = 220. +p<.10, *p<.05, ** p<.01, ***p<.001.

As illustrated in Table C.7, the overall lesson rating was a significant predictor of a positive outcome on the CST-ELA (from 2005 to 2006); however, it was not a significant predictor of reading-level gains from Fall 2005 to Spring 2006, as assessed by the IRI (See Table C.8).

Participation, Engagement and Outcomes

To assess the extent to which children's participation (measured as the number of semesters they participated out of four) or engagement (measured as the extent to which children felt a sense of belonging to CORAL) were related to change between Fall 2004 and Spring 2006 on any of the 15 outcomes explored in this study (13 survey outcomes, the IRI reading-level assessment and the CST-ELA) P/PV conducted a series of OLS regressions (with a logit for the CST analysis). These analyses controlled for the same demographic variables as the analyses described earlier in this section and also included the value of the outcome variable at Time 1 in order to assess change on the outcome of interest. The results of these analyses are summarized in Tables C.9, C.10 and C.11. These analyses were used to provide the adjusted mean changes reported in Table 15 of Chapter 6.

Because sense of belonging emerged as a significant predictor on 10 of the 15 outcomes, P/PV conducted additional analyses to attempt to understand the potential predictors of children's sense of belonging. We correlated the quality ratings for the literacy strategies, adult support, group management, instructional quality and connection making for each of the 43 groups with the average sense of belonging for each group and found no significant correlations. Children's sense of belonging was predicted for 2006 based on their perceptions of CORAL in Fall 2004. Two constructs were found to be significant: positive peer relationships at CORAL and how safe children felt at CORAL. Results of these analyses are summarized in Table C.12.

Subgroup Analyses

For Tables C.7–C.12, P/PV also introduced interaction variables consisting of quality, participation or belonging as an interaction term with individual characteristic variables (i.e., English learner status, grade-level at start of the evaluation, and achievement level at start of the evaluation). These analyses did not add significantly to the variation explained by the main effects models and, thus, the main effects models are presented throughout the report.

Table C.8. HLM Analysis Predicting Spring 2006 IRI Score Based on Overall Lesson Rating, Participation and Participant Demographics

CATEGORIES	ODDS RATIO
Girl	-.08
Grade 5	.03
Fall 2005 IRI score	.65***
English learner	-.53***
African American	-.16
White	.12
Asian	.22
Multi-race	-.25
Other race	-.04
Days of literacy child attended between IRIs	.00
Overall lesson rating	.19

Excluded categories are Latino children, fourth-graders, English-proficient children and boys.
 N = 298. +p<.10, *p<.05, ** p<.01, ***p<.001.

Table C.9. Relationships between Participation, Sense of Belonging and Change in Children's Grade-Level Reading Score and Reading Attitudes

	Like reading	Pleasure reading each day	Reading efficacy	Pleasure reading in the last four weeks	Talked with an adult about something read	Spring 2006 grade-level reading score
Time 1 rating of outcome of interest	.25***	.10*	.15**	.03	.09	.67***
Number of semesters	.04	.08	.09	-.04	.10	-.06
Sense of belonging	.27***	.12*	.03	.24+	.47***	.13
Time 1 rating of how often she/he "does not finish homework"	0	-.03	-.07*	.03	-.07	-.16*
Time 1 rating of how often "talked about something she/he read with an adult"	-.03	.04	.03	0	See time 1 rating above	-.02
Time 1 rating of how often she/he "missed a day of school"	-.06	.15***	-.07	.09	.10	-.17
Fall 2004 IRI grade-level reading score	.05	.06*	.16***	.09	-.01	See time 1 rating above
Girl	.07	.03	-.21*	.41*	.27*	-.30+
Grade 4 fall 2004	-.13	.09	-.17	-.19	-.05	.35
African American	.16	.06	.08	.09	.32	.15
White	-.07	-.02	-.10	.10	.31	-.47
Asian	.22*	.22+	.15	.21	.25	.54
Multi-race	.33**	-.02	.09	.14	.01	-.7
Other	-.02	-.11	-.05	.10	-.15	-.01
English learner	.09	.08	-.22+	.16	.04	-.12
Number of stressors in the past year	.07+	.03	.09+	-.01	.08	.10
Sample size	302	299	302	299	302	301

These are unstandardized coefficients from OLS where youth's outcomes are modeled as a function of their demographics (grade level, ethnicity and gender), English learner status, Fall 2004 grade-level reading score, number of stressors in year prior to survey, number of semesters of CORAL attended and sense of belonging. Youth's Fall 2004 ratings of how often they talk to an adult about what they read, how often they go to class without completing homework and how often they have gotten in trouble at school are included as control variables because they were predictors of attendance and engagement. Data derive from youth surveys, IRI assessments and site attendance information. The CST analysis is a logit. The clustered nature of the sample (by site) is accounted for in the estimation of the covariance matrix. Excluded categories are English-proficient children, Latino children, third-graders and boys (Fall 2004). A separate regression was run for each outcome. +p<.10, * p = <0.05, ** p = <0.01, *** p = <0.001.

Table C.10. Relationships between Participation, Sense of Belonging, Change in Children’s School Attitudes and Behaviors

	Pays attention in school	Likes school	Does NOT finish homework	Wants to go to school	Studied hard for a test	Felt unsafe at school	Missed a day of school	Has gotten in trouble at school
Time 1 rating of outcome of interest	.17*	.21***	.14*	.19*	.15**	.07+	.16*	.19**
Number of semesters	-.01	.02	.06	-.12*	-.15**	.06	0	.10*
Sense of belonging	.16***	.33***	-.07	.43***	.18**	-.22**	.01	-.20**
Time 1 rating of how often she/he “does not finish homework”	-.07	-.02	See time 1 rating above	-.01	-.03	.01	.04	.01
Time 1 rating of how often “talked about something she/he read with an adult”	-.01	.04	-.02	.06	.04	0	-.02	.02
Time 1 rating of how often she/he “missed a day of school”	-.10	-.08	.10	-.03	-.03	.09	See above	.02
Fall 2004 IRI grade-level reading score	.01	-.05	-.08	0	-.03	.05	.05	-.02
Girl	.29*	.17	-.24	.04	-.02	.54***	-.13	-.38*
Grade 4 fall 2004	.12	-.06	.26+	.09	-.19	.01	-.06	-.01
African American	-.21	.07	-.29	-.09	-.17	-.31	-.08	.06
White	-.21	-.26	-.05	-.04	-.28	-.08	-.11	-.32**
Asian	.06	.29*	-.09	.34+	-.13	.31	-.06	-.09
Multi-race	-.09	-.24	.08	.07	.06	-.16	.01	.09
Other	.04	-.21	.34	.01	-.47*	.38	.22	-.24
English learner	-.19	.17+	-.02	.14	-.07	.23	.02	.08
Number of stressors in the past year	-.08	.01	.02	.05	-.04	0	.08**	.07*
Sample size	302	301	302	302	302	298	302	302

These are unstandardized coefficients from OLS where youth’s outcomes are modeled as a function of their demographics (grade level, ethnicity and gender), English learner status, Fall 2004 grade-level reading score, number of stressors in year prior to survey, number of semesters of CORAL attended and sense of belonging. Youth’s Fall 2004 ratings of how often they talk to an adult about what they read, how often they went to class without completing homework and how often they missed a day of school are included as control variables because they were predictors of number of semesters of attendance and Spring 2006 sense of belonging. Data derive from youth surveys, IRI assessments and site attendance information. The CST analysis is a logit. The clustered nature of the sample (by site) is accounted for in the estimation of the covariance matrix. Excluded categories are English-proficient children, Latino children, third-graders and boys (Fall 2004). A separate regression was run for each outcome +p<.10, * p = <0.05, ** p = <0.01, *** p = <0.001.

Table C.11. Relationship between Participation, Sense of Belonging and a Positive Outcome on the CST-ELA from 2004 to 2006

	POSITIVE OUTCOME ON THE CST-ELA
Number of semesters	1.1
Sense of belonging	.8
Time 1 rating of how often she/he "does not finish homework"	.7+
Time 1 rating of how often "talked about something she/he read with an adult"	1.0
Time 1 rating of how often she/he "missed a day of school"	.5***
Girl	1.1
Grade 4 Fall 2004	.7
African American	.9
White	.6
Asian	.9
Multi-race	.4
Other	.2
English learner	.6*
Number of stressors in the past year	1.0
Sample size	169

These are odds ratios from logit analyses where children's positive outcomes on the CST-ELA are modeled as a function of the youth's demographics (grade level, ethnicity and gender), English learner status, number of stressors in year prior to survey, number of semesters of CORAL attended and sense of belonging. Youth's Fall 2004 ratings of how often they talk to an adult about what they read, how often they go to class without completing homework and how often they have gotten in trouble at school are included as control variables because they were predictors of attendance and engagement. Data derive from youth surveys, IRI assessments, school records files and site attendance information. The clustered nature of the sample (by site) is accounted for in the estimation of the covariance matrix. Excluded categories are English-proficient children, Latino children, third-graders and boys (fall 2004). +p<.10, * p = <0.05, ** p = <0.01, *** p = <0.001.

Table C.12. Predicting Spring 2006 Sense of Belonging Based on Children's Fall 2004 Ratings of the CORAL Supports and Opportunities, Their Demographic Characteristics, and English Learner Status

	SPRING 2006 SENSE OF BELONGING
Girl	.25
English learner	.07
Fall 2004 grade-level reading score	-.01
African American	.02
White	-.02
Asian	.01
Multi-race	-.25
Other race	-.06
Grade 4	.00
Feel safe at CORAL	.13+
Supportive adults at CORAL	.04
CORAL activities get me interested	.03
Positive peer relationships at CORAL	.22*
Staff makes sure kids treat each other with respect	.00
Some kids at CORAL are bullies	.01
Activities at CORAL get out of control	-.02
Number of semesters of participation	.07
Sample size	301

These are unstandardized coefficients from OLS where sense of belonging is modeled as a function of the youth's demographics (grade level, ethnicity and gender), English learner status, Fall 2004 grade-level reading score, and children's Fall 2004 ratings of the CORAL adults, activities and environment. Data derive from youth surveys and IRI assessments. The clustered nature of the sample (by site) is accounted for in the estimation of the covariance matrix. Excluded categories are English-proficient children, Latino children, third-graders and boys (Fall 2004). + $p < .10$, * $p = < 0.05$, ** $p = < 0.01$, *** $p = < 0.001$.

**APPENDIX D: CORAL CITY
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