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ABSTRACT

This report describes the early reading program in Emerald Elementary School, located in a Midwest urban fringe district. From 1996 through 1998, Emerald's students performed well above the district average or near the state average on reading achievement. During this period, the school had at least half of its students eligible for free or reduced lunch and a student mobility rate of approximately 40%. This exceptional achievement placed Emerald among the top-performing high-poverty schools in its state. The cornerstone of Emerald's early reading program was referred to as a literacy rotation in which Grade 1 students had access to four small-group instructional approaches for two hours weekly. Beyond the literacy rotation, a variety of safety nets for supporting struggling readers was identified. At a broader level, several mechanisms for facilitating communication among the staff, professional development, collaboration, and participation in state and federal educational initiatives were found. Analysis of the early reading program identified five key elements of school operation: focus on student outcomes; multiple reading programs in every classroom; shared responsibility for student success; strong leadership at school and classroom levels; and a veteran, knowledgeable staff. These elements were related to resource allocations within the school. Contains 1 figure, 3 tables of data, 8 notes, and 24 references. (Author/NKA)

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ED 436 753

CIERA REPORT

# Early Reading Programs in High-Poverty Schools

## Emerald Elementary Beats the Odds

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U.S. DEPARTMENT OF EDUCATION
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**CIERA REPORT #3-009**
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CIERA
Center for the Improvement of Early Reading Achievement

CS 013 805

# Early Reading Programs in High-Poverty Schools: Emerald Elementary Beats the Odds

## CIERA REPORT #3-009

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**CIERA Inquiry 3: Policy and Profession**
**How are resources allocated for reading instruction in schools where low-income children are particularly successful? How do these patterns differ from other high-poverty schools with lower achievement?**

This report describes the early reading program in Emerald Elementary School. From 1996 through 1998, Emerald's students performed well above its district average and above or near the state average on reading achievement. During this period, the school had at least half of its students eligible for free or reduced lunch and a student mobility rate of approximately 40%. This exceptional achievement placed Emerald among the top performing high-poverty schools in its state.

The cornerstone of Emerald's early reading program was referred to as a literacy rotation in which grade 1 students had access to four small-group instructional approaches for two hours per week. Beyond the literacy rotation, a variety of safety nets for supporting struggling readers was identified. At a broader level, several mechanisms for facilitating communication among the staff, professional development, collaboration, and participation in state and federal educational initiatives were found.

Analysis of the early reading program identified five key elements of school operation: focus on student outcomes; multiple reading programs in every classroom; shared responsibility for student success; strong leadership at school and classroom levels; and a veteran, knowledgeable staff. These elements were related to resource allocations within the school.

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# Early Reading Programs in High-Poverty Schools: Emerald Elementary Beats the Odds

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Learning to read is arguably the most important accomplishment of the first few years of schooling. The ability to read—fluently and with good comprehension—opens doors to human knowledge which, in turn, can lead to better jobs and more productive, satisfying lives. On the other hand, failure to acquire basic literacy skills in the early years of schooling too often leads to disappointment, disengagement from the educational process, and drastically lower expectations for success beyond school.

Although most children learn to read by the time they exit the primary grades of elementary school, there are many children that do not achieve an appropriate level on this crucially important process. Moreover, of the children who continue to struggle as readers at the end of the primary grades, a disproportionate number are also poor. While low and slow progress in reading has serious consequences for all children, it is especially critical for children who are already placed at risk by poverty.

What is the status of early reading achievement for children living in poverty? An examination of the most recent data from the National Assessment of Educational Progress (NAEP) provides a shocking overview. In 1998, NAEP completed its third wave of national assessments including measures of reading achievement at grade 4 (Donahue, Voelkl, Campbell, & Mazzeo, 1999). For the first time, NAEP data allowed comparisons between students eligible for free/reduced lunch and those who were not. Since eligibility for free/reduced lunch is based directly on family income, we can compare NAEP reading measures for students above and below this income threshold.[1]

Although there was limited good news in the most recent NAEP data, longstanding and unacceptably large differences in reading performance related to student poverty levels were also documented. At grade 4, more than twice as many students eligible for free/reduced lunch scored below the "basic" achievement standard set by NAEP compared to students who were not eligible (59% versus 27%). If the achievement criterion is raised to "proficient," then 87% of grade 4 students who are eligible for free/reduced lunch fall below that standard. These data indicate that early reading programs are not working adequately for children in poverty.

According to current estimates, between one fifth and one quarter of American children are living in poverty. If hundreds of thousands of students are to have access to better jobs and higher quality lives, these enormous differences simply must be reduced. In America, no educational issue is of greater national significance than ensuring that all children learn to read—fluently and with comprehension—in the primary grades of elementary school.

Students placed at risk by poverty are neither evenly distributed among America's school districts nor between schools within districts. As the NAEP data imply, average early reading performance for a school tends to decrease as the proportion of students eligible for free/reduced lunch increases. Hence, the statistical expectation for reading performance in high-poverty schools is relatively low. However, there are high-poverty schools that "beat the odds," where typical student performance in reading greatly exceeds what would be expected from poverty data alone. Somehow, these schools, compared to nearby schools, produce students who learn to read fluently and with comprehension by the end of the primary grades. Moreover, they do so while operating with similarly high percentages of students eligible for free/reduced lunch, similarly high student mobility rates, similar curriculum frameworks, and similar per-pupil expenditures.[2]

What do early reading programs look like in high-poverty, high-performing schools? How have these schools allocated resources to develop, implement, and sustain their early reading programs? Although it is unlikely that these broad questions have simple, straightforward answers, our initial goal is to describe practices in specific high-performing high-poverty schools. This report describes the early reading program in Emerald Elementary School.[3] The Emerald case is the first in a series of six case studies of early reading programs in high-performing, high-poverty schools being conducted as part of this research effort. Each case is reported separately; the seventh report in this series presents a cross-case analysis.

Since a variety of contextual and other factors have been shown to virtually preclude simple importation of one school's solution to another school, the examples in this series of cases are not intended to apply directly to any other school. Moreover, the early reading programs that we describe do not necessarily represent the only or "best" solution for their local contexts. This line of work offers two kinds of potential benefits. First, the cases themselves may be useful to practicing educators, not as blueprints to follow but as analogues to suggest directions for program development and resource allocation. Second, the cases, together with a cross-case analysis, may add to what is already known about early reading programs in high-poverty schools.

We come to this study with the view that teachers exert a critically important influence on how well and how quickly children learn to read in high-poverty schools. However, in these case studies, we are not looking at individual classrooms but take the school as the unit of analysis. Consequently, our primary focus is cross-classroom and whole-school mechanisms that facilitate learning for an entire cohort of students. That is, we are looking for "programmatic" structures in schools—structures that make the early reading program[4] more than the sum of individual teachers' efforts in relatively isolated classrooms.[5]

## Study Background

Learning to read is a gradual process that occurs over several years. It is surprisingly difficult to say precisely when the process begins (or ends), and there is wide variation among children in when they may be said to have acquired reading. These complications notwithstanding, most children in America learn to read by about age nine. For over a century, American schools have recognized the importance of learning to read by making it the cornerstone of elementary school instruction. In the early grades, activities designed to help students learn to read typically account for more instructional time than any other subject area. It is not unusual for students in grades 1 and 2 to spend up to 50% of the school day on literacy-related activities (Fisher & Hiebert, 1990).

Research on early reading in school settings is voluminous. For purposes of the current study, we segment this literature into two parts. The first, and by far the larger, part is made up of studies of reading instruction that focus on the broad array of reading interventions that have been tried in classrooms. These studies invariably use classrooms or individual students as the unit of analysis. The second, and much smaller, group of studies takes schools as their unit of selection and analysis. School studies explore the effects of a variety of between-classroom and schoolwide variables. School studies may or may not include an examination of factors that operate within classrooms. Much of the debate over what constitutes appropriate reading instruction in schools is based on results of studies of reading instruction that by their nature are not designed to detect the effects of schoolwide mechanisms on reading achievement.

### Studies of Reading Instruction

Over several decades, studies of reading instruction have generated a substantial knowledge base for teaching reading in classroom settings. During this period, literally thousands of studies have been conducted and a wide variety of reviews have been written (Adams, 1990; Barr, Kamil, Mosenthal, & Pearson, 1991; Chall, 1967; Pearson, Barr, Kamil, & Mosenthal, 1984; and Snow, Burns, & Griffin, 1998, among others). The review by Snow and her colleagues (1998) provides a recent, comprehensive overview of research-based knowledge about teaching children to read.

Effective and powerful instruction from knowledgeable teachers is the key to successful early reading achievement. Balanced instruction providing all children with opportunities to master concepts of print, learn the alphabetic principle, acquire word recognition skills, develop phonemic awareness, engage in and sustain an interest in reading, and experience a wide range of materials in the context of developmentally appropriate instruction continue to be the major deterrent against reading failure (Adams, 1990; Hiebert, Pearson, Taylor, Richardson, & Paris, 1998; Snow et al., 1998). The same reviews also provide compelling evidence that children who do not learn to read fluently and independently in the early grades have few opportunities to catch up to, and virtually no chance to surpass, their peers who are reading on grade level by the end of third grade. For many poor, language-minority, and dialect-speaking children attending low-performing schools, the odds of learning to read by the end of third grade are far too low.

This body of research is primarily concerned with how various characteristics of students, instruction, reading tasks and materials, and classroom settings affect, either singly or in combination, reading acquisition. Although there can be no doubt about the importance of this body of work, it does not explore between-class and schoolwide factors that may also contribute to reading acquisition in schools. For research on these broader factors, we turn to school studies.

## School Studies

In the 1970s, a relatively small group of researchers and program evaluators began studying what they referred to as *effective schools*. The general idea of this line of work was to identify characteristics of schools that were performing well beyond what would be predicted from one or more demographic variables. Much of this work was not directed specifically at early reading performance but included multiple subject areas. The studies examined schools that scored well on standardized or criterion-referenced tests while serving students from inner-city areas or neighborhoods with low socioeconomic status. This set of studies is quite distinct from the studies of reading instruction. The research on effective schools is a relatively small corpus consisting of a few dozen studies, and with few exceptions, the researchers were primarily affiliated with areas of education other than reading. However, this line of work is particularly germane to the current study because it focuses on factors beyond individual classrooms that appear to affect student learning.

Hoffman and Rutherford (1984) reviewed several studies of school effects, giving special attention to reading programs. They concluded that three categories of characteristics contributed to the success of reading programs. The categories included program characteristics (explicitly articulated objectives and role expectations, provision for continuous student progress, flexibility in matching materials and instruction to student needs, and stability of programs over several years), leadership behaviors (establishing reading improvement as a school priority, being knowledgeable about reading instruction, actively facilitating instructional decisions, establishing and maintaining monitoring of student progress, and evaluating teachers), and psychological conditions (high expectations for students, calm and businesslike school climate, staff commitment to the reading program, staff cooperation, parental involvement, and attribution of reading failure to program defects).

Although very few school effects studies appear in the archival literature, their findings were used in a variety of staff development programs in several states. Early advocates of school reform (see for example, Edmonds, 1979; Comer, 1997; Slavin, Karweit, & Madden, 1989) incorporated characteristics of effective schools in their programs for at-risk students. Successive waves of educational reform in the 1980s and 1990s increasingly took the view that the school (and sometimes larger units) was the key level for intervention. This view was strongly influenced by research on the principalship and research on schools as organizations as well as the effective schools studies.

A variety of studies in the last decade, using a range of methodologies and generally including school effects on reading outcomes, has produced results that are not incongruous with the earlier research on effective schools. For example, positive effects on reading achievement have been associated with collaboration and community building (Briggs & Thomas, 1997); targeted professional development (Frazee, 1996); curriculum and assessment alignment (Stringfield, Millsap, & Herman, 1997); clear and agreed-upon goals and objectives at the state and school levels (Rossi & Stringfield, 1997); high expectations for students (Foertsch, 1998); early interventions and strategies for struggling readers (Lein, Johnson, & Ragland, 1997; Legters & McDill, 1994); common planning time for teachers (Miles & Darling-Hammond, 1997); and strong school leadership (George, Grissom, & Just, 1996; Shields, Knapp, & Wechsler, 1995). Although more studies could be cited and the list of positive effects lengthened somewhat, studies of the last decade, often with improved methodologies, tend to confirm the general characteristics identified by the work on effective schools.

These general findings notwithstanding, the implications for early reading programs in high-poverty schools are still not entirely clear. On the one hand, studies have often combined results for several subject matter areas, elementary and secondary schools, or high- and low-poverty populations. On the other hand, findings have been presented at a level of abstraction that makes their implications for specific schools and school contexts less than obvious. It may be easier to summarize raw data describing an early reading program in conceptual terms like "strong curriculum leadership," "good school atmosphere," and "emphasis on reading" than it is to design and implement a program based on these concepts.

We draw several conclusions for improving our understanding of early reading programs in high-performing, high-poverty schools from this brief review. There is partial consensus on the characteristics of high-performing schools. These characteristics constitute an appropriate starting place for increasing our understanding. These empirically derived characteristics are not yet sufficiently well understood to generate a compelling theory or framework for reliable interventions in new sites. Moving forward requires additional descriptive studies of early reading programs and attempts to understand the relationships among the schoolwide and other factors that promote early reading achievement in high-poverty schools.

# Study Design

The overall study consists of six descriptive cases and a cross-case analysis examining early reading programs in high-performing, high-poverty schools. The primary focus of each case study is a description of how the school's early reading program has been organized, developed, and sustained. In individual case studies and the cross-case analysis, we are looking for patterns of resource allocation, between-class arrangements, and schoolwide structures that contribute to high levels of student reading performance.

## Selection of Schools

The primary considerations in selecting schools were student performance in reading and level of poverty in the school population. Additional considerations included geographic region of the country, urban versus rural populations, school size, range of grade levels in school, and presence of limited-English-speaking and bilingual students. Since reading assessment measures vary from state to state, we identified three large states—California, Michigan, and Texas—in different regions of the country and proceeded with site selection within those states.

We identified candidate schools within the three states by examining three years of state testing data[6] for schools with at least 50% of the student population eligible for free or reduced lunch. We also considered published lists of Title I Distinguished Schools for the years 1995 to 1998. These procedures yielded 130 schools in the three states. These schools were included in a larger national survey[7] of schools that beat the odds conducted by CIERA in spring 1998. Twenty-seven schools from the three target states completed the survey.

Two schools were chosen from each of the three states. In the final stage of selection, we attempted to vary some demographic variables and restrict others. We included three schools without limited English speakers and three schools with varying proportions of limited English speakers. We avoided schools with low mobility rates among students, enrollments less than 350, or grade ranges smaller than K-5. Within these constraints, we chose schools with higher levels of reading achievement and higher levels of poverty. Each of the selected schools was contacted by telephone and invited to participate in the study. All six schools agreed.

## Data Collection

The following data were collected at each school: structured interviews of approximately an hour for each building principal and five to seven early reading program staff; school and classroom observations of approximately 12 hours per school; field notes from observations and informal conversations with school staff; and selected artifacts from the early reading programs. Two researchers made three-day visits to each school to observe and conduct interviews during the 1998-99 school year. These data, together with the survey responses described earlier and selected public information about the schools, constituted the corpus of information from which this and the six other reports in this series were generated. For each case, the interviews were transcribed and read multiple times to identify content themes. Field notes, observations, and artifacts were examined to provide additional evidence for the themes identified in the interviews.

## Emerald Elementary School

Emerald Elementary School (Emerald) is one of a handful of elementary schools in a Midwest urban fringe district of approximately 6,000 students. From 1996 through 1998, Emerald's fourth graders outperformed both their district average and the state average (with one exception) on the state-mandated fourth-grade reading assessment (Table 1). This level of achievement was accomplished in spite of the fact that Emerald had much higher levels of student poverty than either its district or the state average. For the same three-year period, Emerald's average enrollment was approximately 12% lower than the state's K-12 building average of 494.

Table 1: Poverty and Achievement Levels for Emerald Elementary, 1996–98

| | % F/R LUNCH 1996–98* | % SATISFACTORY 1996–98† |
|---|---|---|
| State average | 30-32 | 49-59 |
| District average | 24-26 | 38-49 |
| Emerald | 47-50 | 56-69 |

* Percent of students eligible for free/reduced lunch.

† Percent of students scoring satisfactory or better on the state assessment of fourth-grade reading.

The school's physical plant reveals years of expansion. The one-story building has three distinct wings. A hallway connects two wings at the top level of the gently sloping site with the third wing at a slightly lower elevation. The building is scheduled to be replaced by the year 2000—the result of a successful bond initiative. The north side of the building is bordered by a service road that runs parallel to a major interstate alongside an industrial area. Across the interstate to the north of the school is a county sewage plant and an industrial airport. To the south of the school is a wooded area. In fact, the back of the school opens up to a spacious playground with a sloping grassy field that leads to a river. The school's proximity to major arteries and industry belies its relative inaccessibility to its own community. Teachers reported that, in the past, the school was on the public bus route. When this service was discontinued a few years back it left the nearest bus stop too far for parents and others to visit the school easily. Thus, aside from children who are able to walk from low-income housing and small single-family homes in the neighborhood, students are bused.

Though the school is old, it is very well maintained and provides a sense of warmth to first-time visitors. Of the three distinct wings that form the school, the one housing first graders has "walk-through" classrooms, allowing access either through an outside walkway that overlooks a lower wing of the school or through the adjacent classrooms. The two kindergarten classrooms are in the lower wing closest to the playing field.

In May 1998, Emerald reported a licensed staff of approximately 25, including 16 classroom teachers (K-5) and 2.5 Title I staff. They also reported 6 Title I paraprofessionals and no English as a Second Language (ESL) or bilingual staff. At the beginning of the 1998-99 school year, enrollment was just over 460 students, with an average class size of 29 for grades K-5. About 70% of Emerald's students were white and 26% were African American. There were no language minority children in any of the classrooms of teachers interviewed for the study. In fall 1998, Emerald had a mobility rate of 40%, which the principal claimed was consistent with recent years.

Our interviews with early elementary staff at Emerald revealed a mature, experienced cadre that had been together for more than 5 years. The principal had almost 30 years experience in K-8 education. She had taught at grades 3 and 4 in the early part of her career and had been principal at Emerald for about 20 years. Of the teachers we interviewed, the average number of years in K-8 education was 17, ranging from 5 years for the reading specialist to more than 30 years for a special education teacher. The reading specialist was not as young as her five years of teaching experience suggested. She was close in age to her peers, having returned to teaching after substitute teaching following college, raising a family, and subsequently obtaining a master's degree in reading from a local university. In addition to the principal, five of the teacher interviewees reported having master's degrees. These same teachers report an average of more than 10 years at Emerald. The interviewees also reported extensive experience in early childhood and elementary school teaching in both urban and private schools, including a variety of experiences beyond the classroom such as developing an all-day kindergarten and directing a church education program.

## Early Reading Instruction at Emerald Elementary School

For almost ten years, Emerald has offered three types of class arrangements—single-grade, split-grade, and multiage—each of which groups grade levels, and therefore instruction, somewhat differently. The early reading program spans all classrooms with first graders. Before proceeding, a description of the types of classes available and the methods used for assigning students to them may be useful.

### Allocation of students to classes

Emerald offers traditional single-grade classes in which one teacher works for one year with a class of students on the curriculum prescribed for that grade level. This is the most common arrangement in K-12 schools across America. Emerald also offers split-grade classes that include two consecutive grade levels. In split-grade classes, one teacher works with both grades while keeping the curriculum for each grade relatively distinct. Split-grades have approximately equal numbers of students at each grade level. Ordinarily a student will stay with the same teacher (and about half of the students) for two school years. The third type of class is multiage and also contains two consecutive grades, but the distinction between grades is far less pronounced. Students complete the curriculum for two grades in a two-year span in one classroom. This allows for greater flexibility in when particular units are taught to particular subsets of students, as well as in instructional grouping arrangements.

Emerald contains 16 classes (and a room for educable mentally impaired students). Table 2 presents the distribution of classes by type during the 1998-99 school year. Note that there were (almost) complete paths through the school within each of the class types. For any number of reasons (i.e., student mobility, availability of teaching staff, requests from parents), this configuration may shift somewhat from year to year.

Table 2: List of Classes by Type at Emerald Elementary, 1998–99*

| SINGLE-GRADE CLASSES | SPLIT-GRADE CLASSES | MULTIAGE CLASSES |
|---|---|---|
| K—all-day | | |
| K—half-day | | |
| 1 | | 1-2 |
| 1 | | 1-2 |
| 2 | 2-3 | 2-3 |
| 3 | 3-4 | 3-4 |
| 4 | | 4-5 |
| 5 | | |
| 5 | | |

* In addition to these 16 classes, the school had one class for educable mentally impaired students.

At Emerald, teachers annually recommend a class type that would be appropriate for each student. At the end of each school year, the principal reviews these recommendations along with parent requests and any other pertinent information that might inform the decision. Class lists are created so that there is a balance between the needs of students and various other constraints inherent in managing a school. This procedure results in comparable ranges of student ability from class to class.

### The kindergarten program

There are two kindergarten classrooms at Emerald, one half-day with 30 students and the other full-day with 25 children. The full-day kindergarten, on which the following description is primarily based, was in its first year of operation during 1998-99. Because of its all-day status, the class had one full-time (all-day) and one part-time (four hours per day) paraprofessional in addition to the classroom teacher.

A typical day began with breakfast for about three quarters of the class. Instructional activities were designed to promote oral language and vocabulary development with opportunities to work on readiness skills such as directionality, concepts of print, and recognition of letters. Morning instructional activities focused primarily on literacy. Children were instructed in large groups for activities such as reading from Big Books and in small groups for a variety of activities. At the start of the school year, each small group generally worked on the same activity. However, by the end of the year, the small-group activities varied as children's readiness for reading varied. Children were read to from trade books on a regular basis. During our visit to the room, the teacher read *The Three Bears*, a book she expected the children to have heard before. The teacher reported surprise on learning that some students had never heard it.

The teacher kept portfolios for each child providing information on their understanding of book parts, letter recognition, sound recognition, sight word vocabulary, and other concepts related to print. The portfolios also included information on children's abilities to classify, sequence, and analyze events. Using Big Books, the reading specialist (three days per week) or the librarian (two days per week) conducted daily, whole-group, guided reading activities. This procedure filled two important functions. It allowed the kindergarten teacher to have a daily planning period, and it gave the reading specialist and librarian direct experience with next year's first-grade readers. Although the kindergarten program provides a foundation in emergent literacy and oral language development, the core of Emerald's early reading program begins with grade 1.

## Reading instruction in grades 1 and 2

As mentioned earlier, Emerald offers three types of classes. Students who entered grade 1 either as graduates of an Emerald kindergarten or as new students were placed in one of two traditional (i.e., single-grade) grade 1 classes or in one of two multiage grade 1–2 classes (see Table 2). Students exiting traditional grade 1 classes entered the traditional grade 2 class, the split grade 2-3 class, or the multiage grade 2–3 class. Students who entered the multiage grade 1–2 classes were likely to remain in those classes through grade 2. However, if a different class type were judged to be beneficial for a student, then the student could be moved at any time. Student placements at Emerald are based on input from a variety of sources (including recommendations from their previous teacher and requests from parents) with the principal making the ultimate decision. The various class types provided a range of settings for students (and teachers) forming the context for the early reading program as well as other programs in the school.

For all first graders, regardless of their class type, the better part of every morning was spent on literacy activities. The afternoon focus was on mathematics, science, social studies, and specials (i. e., art, physical education). A schematic diagram for a typical week (Wednesdays excepted) is presented in Figure 1 and illustrates how the literacy block was organized in one of the multiage grade 1–2 classes. For this class, the school day began with a 30-minute period of silent reading (9:00-9:30). During this time, students read from self-selected leveled books, chosen the previous day. At 9:30, the literacy rotation began.

## Literacy rotation

Since the 1996-97 school year, when Emerald became a schoolwide Title I program, all grade 1 students (and some grade 2 students) have participated in a complex early reading structure referred to as the literacy rotation. This structure, designed and refined at Emerald, provided consistent small-group instruction tailored to a student's reading performance level for four days per week (30 minutes per day) throughout the school year. Although students had about two hours per day in literacy activities in addition to the time spent in literacy rotation, this structure was an important design feature of the overall reading program.

For 30 minutes during the morning, students were divided into four instructional groups for the literacy rotation. During literacy rotation, each of the groups received concentrated direct instruction on specific reading skills. The literacy rotation instructional team included the classroom teacher, the classroom paraprofessional, the reading specialist, and the special education teacher. For this half-hour period, each team member took a small group of students for instruction specifically tailored to the children's needs.

In one of the groups, about six students worked with strategies and materials from Project READ (Greene & Enfield, 1994) designed to develop alphabetic and phonemic awareness. This group was led by the special education teacher, who is trained in Project READ. Essentially, this group comprised the least advanced students in the class. The Project READ assessment instrument was used to assess student progress. All of the materials for this group were kept in the individual classrooms.

In a second small group, about five early readers worked with the reading specialist as they read new leveled books and reread familiar ones. Other activities in this group included work with sight word vocabulary, rhyming phonograms, and various kinds of writing. The activities of this group reflected several elements of the Reading Recovery approach adapted for small-group instruction. This particular group typically met in a nearby classroom where the instructional materials were also kept.

In the third group, about seven students worked with the classroom teacher on activities that reflected a balanced approach to reading instruction. The teacher selected materials from a variety of reading programs with which she had experience, including Project READ, to meet the instructional needs of her group of students. This group focused on phonemic awareness and vocabulary development as students began to work with basal readers. Running records were kept for children in this group to plot their progress.

The fourth group, led by the paraprofessional, contained about 11 (mostly grade 2) students reading on grade level and worked primarily from the district-adopted reading series. From time to time, the classroom teacher and the paraprofessional switched groups so that both had first-hand experience with students in both groups. These two groups, constituting more than half the class, were generally working at or near their expected grade levels.

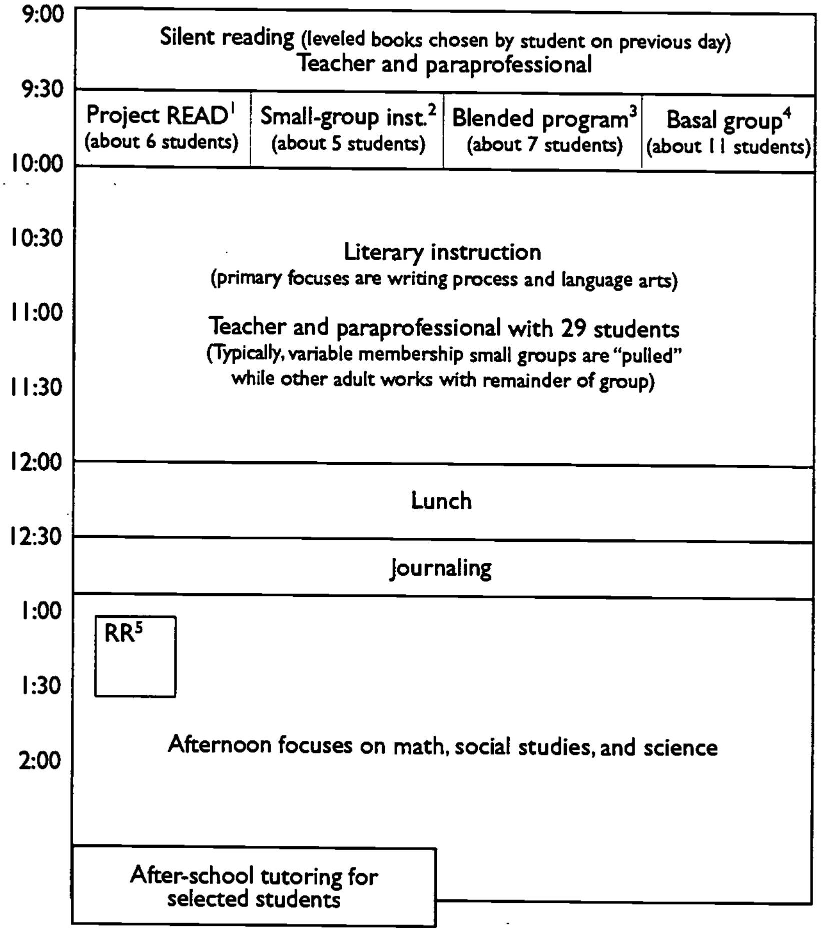
Generally speaking, the more independent readers were placed with the paraprofessional and those not yet reading or with underdeveloped skills were placed with the more highly trained teachers for instruction designed specifically to meet their needs in small-group settings. Both of the multiage 1-2 teachers either did the planning for or planned with their paraprofessionals. Paraprofessionals attended relevant workshops wherever funds and time allowed.

The literacy rotation professional staff[8] met every other week in the reading specialist's room to assess the progress of individual students. Individual student placements were discussed and group reassignments made as needed. Decisions were based on both academic and social needs.

### Other daily and weekly patterns

From 10:00 until 12:00 (Figure 1), the classroom teacher and paraprofessional worked with the class on process writing, reading, and language arts activities. During this time, they often pulled small groups to the side for minilessons on whatever needed additional time at that point in the school year. Student groupings depended on the content and skill to be learned. Sometimes the teacher worked with a small group while the paraprofessional took the larger group, and vice versa.

Figure 1: Schematic diagram of instructional activities in multiage grade 1–2 classroom at Emerald Elementary, 1998–99.


9:00
9:30
10:00
10:30
11:00
11:30
12:00
12:30
1:00
1:30
2:00
Silent reading (leveled books chosen by student on previous day)
Teacher and paraprofessional
Project READ¹
(about 6 students)
Small-group inst.²
(about 5 students)
Blended program³
(about 7 students)
Basal group⁴
(about 11 students)
Literary instruction
(primary focuses are writing process and language arts)
Teacher and paraprofessional with 29 students
(Typically, variable membership small groups are "pulled" while other adult works with remainder of group)
Lunch
Journaling
RR⁵
Afternoon focuses on math, social studies, and science
After-school tutoring for selected students

Notes:

1. Project READ is a structured phonics program taught by a specially trained teacher.
2. Small-group instruction taught by a reading specialist incorporating some features of Reading Recovery.
3. Small-group instruction using a variety of strategies and materials, including basal text, taught by the classroom teacher.
4. Basal reading group (Houghton-Mifflin) taught by a paraprofessional.
5. One-on-one tutoring in Reading Recovery. In the whole school, approximately five students would be participating in Reading Recovery in any given semester.

After lunch, students did free writing in their journals followed by recess and then sessions on science, mathematics, and social studies. On Tuesday through Thursday afternoons, the two adjoining classrooms opened up for 45-minute activity centers, allowing children to move from room to room. Each teacher took responsibility for five centers, for a total of ten separate activities. In setting up these centers, teachers designed activities that accounted for the independent reading levels and areas where children needed additional work. For example, while an art center might reflect the reading or science being covered during regular classroom sessions, an activity such as building birdhouses or weaving potholders might have been set up in order to help with dexterity and eye-hand coordination. Specials (i.e., library, music, art, and physical education, depending on the day of the week) also occurred in the afternoon. As the classroom teacher pointed out, the reading skills that were the focus during the morning were applied during the activities in the afternoon.

The daily schedule (see Figure 1) followed this general pattern for four days each week. The pattern was somewhat different on Wednesdays, since there was no literacy rotation. On Wednesdays, the teacher and paraprofessional worked with the class on literacy and language arts activities throughout the morning. The class also participated in an activity called reading buddies. Every Friday, at the end of the day, half of the class switched with half of a fifth-grade class for 20 minutes of paired readings.

The other classes at Emerald that included grade 1 and grade 2 students varied somewhat from this organizational pattern for literacy instruction. However, all classrooms with grade 1 students, regardless of class type, had literacy rotation. When the two roving teachers completed their literacy rotation activities in one classroom (say from 9:30 to 10:00 in the case described above), they moved to another classroom and conducted literacy rotation in that classroom for thirty minutes. In this manner, literacy rotation was implemented in each of the grade 1 classrooms in the school four days a week.

Literacy rotation did more than provide a range of reading programs in each grade 1 class. This unusual structure created a unique opportunity for teachers to collaborate on identifying and solving early reading problems among the entire cohort of early readers in the school. Emerald students had many opportunities to read and write. All of the classrooms we observed had extensive collections of trade books and other materials that were heavily used in addition to the district-adopted reading series.

For second graders who were not in classrooms with the literacy rotation (such as the traditional grade 2, the multiage grade 2–3, and the split-grade 2–3 class), reading instruction was left to individual teachers and their paraprofessionals with support from one of the school's Title I teachers and the special education teacher. Second graders were primarily working from the basal series, with small-group instruction for children who still needed support in specific skill development. Literacy instruction at Emerald included strong reading and writing components and, for students in grade 2 and above, an emphasis on informational text. This latter emphasis was sharpened at the beginning of the 1998–99 school year partly in response to analysis of student performance on the state reading test. Students in grade 2 and above also received explicit practice on question response formats that appear on the state-mandated tests.

## Provisions for Struggling Readers

Emerald had several mechanisms in place to identify and support struggling readers. First, an early assessment procedure helped to place grade 1 students in the various instructional groups of the literacy rotation. For students who were in an Emerald kindergarten, the kindergarten teachers initiated this process by identifying students in the high, middle, and low thirds of the class at the end of the kindergarten year. The lowest third were individually tested in the first few weeks of grade 1 using an observation survey. By the time that these students had been tested, the grade 1 teachers had enough experience with their classes to nominate additional students for testing, including all transfer students. This information helped the literacy rotation team assign students to different literacy rotation groups and select a handful of students for the first round of Reading Recovery. At the time of the study, five students were enrolled in the first cycle of Reading Recovery.

In this manner, literacy rotation provided a variety of programs for readers, including struggling readers. Since the literacy rotation occurred in all grade 1 classes, students could be moved from one group to another without having to put them in different classrooms. In this way, a struggling reader could benefit from several programs—each with a specially trained teacher—without creating transfers between classes. The reading team was very pragmatic about grouping students; if someone were having trouble in one learning environment, it was discussed at a bimonthly meeting (see later section on planning) and changes were made if appropriate. Since several teachers were likely to have experience with a given struggling reader and the teachers met to discuss individual cases, students who needed a different program or extra help were identified relatively quickly. The flexible grouping of students continued throughout the grades.

Beyond grade 1, there were two additional mechanisms for supporting struggling readers. As previously mentioned, within the regular school day, the special education teacher continued to provide small-group instruction (based on Project READ) for second graders still needing additional support. Outside the classroom, several teachers provided tutoring after school as needed. Summer programs incorporating literacy instruction were also made available to students. In fact, the staff of a 1998 summer program at a nearby school included three Emerald teachers.

At Emerald, students might be held back because of low attendance (more than 60 days missed) but, generally speaking, the school tried to avoid retention before the third grade. In third grade, however, there was a thorough review, and if students had not acquired the necessary skills they could be retained. Some struggling readers might eventually be recommended for testing by the special education unit. If students were classified as special education, they were given access to additional resources to support literacy acquisition.

## Program Development

Most schools are dynamic institutions with ongoing change in their organizational and programmatic features. This was definitely the case at Emerald Elementary School. A brief consideration of its recent history may provide a useful perspective for the case study. Table 3 presents selected events in Emerald's history since 1992-93.

Table 3: Chronology of Selected Events at Emerald Elementary, 1992–99

| EVENT | 92–93 | 93–94 | 94–95 | 95–96 | 96–97 | 97–98 | 98–99 |
|---|---|---|---|---|---|---|---|
| School Improvement Team | X | X | X | X | X | X | X |
| Summer academic program | X | X | X | X | X | X | X |
| Multiage classrooms | X | X | X | X | X | X | X |
| Motivation Project | X | X | X |  |  |  |  |
| School Improvement Project | X | X | X |  |  |  | X |
| Computer Literacy Project |  |  |  | X |  |  |  |
| Schoolwide Title I |  |  |  | X | X | X | X |
| After-school tutoring |  |  |  | X | X | X | X |
| Project READ training |  |  |  | X |  |  |  |
| Literacy rotation planning |  |  |  | X |  |  |  |
| Literacy rotation |  |  |  |  | X | X | X |
| Transitional grade 1 |  |  |  |  | X | X |  |
| State Curriculum Integration Project |  |  |  |  | X | X | X |
| Reading textbook adoption |  |  |  |  |  | X | X |
| Personal Integration Project |  |  |  |  |  |  | X |
| Stanford IX replaces CTBS |  |  |  |  |  | X | X |
| Goals 2000 Project |  |  |  |  |  |  | X |
| All-day kindergarten |  |  |  |  |  |  | X |
| State assessment analysis |  |  |  |  |  |  | X |
| IAS award |  |  |  |  |  | X |  |
| CIERA study participation |  |  |  |  |  | X | X |

As required by state law, Emerald had a School Improvement Team in place in 1992. The School Improvement Team, with representation from the school and the community, is the major policymaking group for Emerald and is described in the next section of this report. The summer school program was in its third year of operation in 1992. One of Emerald's multiage grade 1-2 teachers had a key role in planning and initiating this program. It was not clear from the interviews when multiage classrooms were introduced, but they were already in place in 1992-93. Teachers reported that the introduction of multiage classes coincided with a shift from traditional basal reading instruction to the whole language approach in early reading.

During the 1992-93 school year, Emerald began two collaborative projects with two local universities. The Motivation Project and the School Improvement Project were reported to have introduced lasting changes at the school. Both projects brought specialized training to Emerald staff and continued for three years. Note that the School Improvement Project was rejoined in 1998-99 after several years of inactivity.

The next wave of change at Emerald began in 1995-96. That year marked Emerald's first as a schoolwide Title I program, and dramatic changes to the early reading program were instituted. Meetings were held with representatives of the state department of education on instructional and programming issues. Staff began planning for the literacy rotation. Project READ, a component of the literacy rotation, was introduced at Emerald in 1995-96 with a series of training sessions. With the changes accompanying the schoolwide Title I program, the role of the Title I teacher shifted from a "pull-out " to a "push-in"(i.e., in the regular classroom) model. Finally, after-school tutoring for struggling readers also began during this school year.

The 1996-97 school year brought additional initiatives. Having spent the previous year planning for the literacy rotation, the program was implemented in all grade 1 classrooms. Reading Recovery was introduced for selected first graders. In the same year, a transitional grade 1 classroom was piloted. This initiative continued for a second year before being replaced in 1998-99 by an all-day kindergarten. During this period, the school district considered adopting a new reading textbook series, and Emerald became involved with the state department of education's curriculum integration project.

In the last two years, Emerald Elementary School has continued to participate in a variety of innovations that have had a direct or indirect impact on its early reading program. These included training for and implementation of a new textbook series, replacement of the California Test of Basic Skills with the Stanford IX, participation in a personal integration project, and cooperation with the Goals 2000 Project. During this same period, Emerald was recognized as a Distinguished Title I School by the U.S. Department of Education.

## Emerald Elementary School as a Proactive Organization

Emerald was repeatedly described as a pragmatic, proactive organization. From interviews and observations, there were frequent references to the school's willingness to engage in problem solving. The staff appeared to generate a variety of solutions for most of the problems they encountered and encouraged high levels of communication on school business. This section describes four manifestations of this proactive, problem-solving orientation: structures for planning and management, professional development, collaboration, and participation in state and federal education initiatives.

### Structures for planning and management

Interviews with staff revealed that program planning and management occurred on several levels to deal with both short and long-range concerns. There were two major structures at the school level and a variety of formal and informal structures that operated within the early reading program.

By state mandate, each school has a School Improvement Team. During this study, the School Improvement Team was chaired by the principal and included several parents, a school social worker, two Title I teachers, the reading specialist, two special education teachers, and teacher representatives from each grade level. The School Improvement Team met at least once each month. However, during some periods, especially at the beginning of the school year or when state-required reports were due, meetings were more frequent.

Staff meetings, which occurred every Thursday morning from 8:15 to 9:00, constituted the second structure at the school level. These meetings were always focused on educational issues. Topics were often suggested and discussions led by teachers. At the time of the interviews, Emerald was implementing the state language arts curriculum framework and staff meetings focused on issues arising from this effort. These two structures typically dealt with issues involving the school and the community and programmatic issues like the implementation of district textbooks or student performance on state achievement tests.

The early elementary staff met several times during the school year to discuss instructional issues. Among other things, these meetings highlighted the curriculum connections across grade levels. According to one teacher, cross-grade meetings were held "so that we know what's expected at each grade level, we know what we should be looking for, and if not, we try to find ... the missing link." In addition, teachers met in grade level groups several times each year.

Within the early reading program, there were two kinds of meetings. As previously mentioned, the literacy rotation was critical to the early reading program at Emerald. Teachers reported that in the early days of the literacy rotation, there was no formal mechanism to manage the program. Frustrated by trying to have quick conversations in hallways throughout the day, the teachers themselves suggested creating a regular meeting time. This resulted in a half hour biweekly meeting for each of the four classrooms involved in the literacy rotation.

Meetings were held from 9:00 to 9:30 on Mondays and Wednesdays in the reading specialist's room, which provided a quiet space away from classrooms. A paraprofessional worked with students in their classroom, allowing the reading specialist, the special education teacher, and the classroom teacher to meet. Input from paraprofessionals was obtained informally through the classroom teachers.

Since individual teachers planned for the children in their groups, instruction per se was not the focus at these meetings. Rather, they discussed "every single child—his strengths, weaknesses, [and his group] placement." Decisions on reassignments were implemented immediately. Decisions were not always based on academic needs; behavior and learning styles were also taken into consideration. The literacy rotation meeting was the primary mechanism for staff to keep abreast of individual student progress and move students from group to group.

The second type of meeting among early reading program staff was more informal. Some of these meetings were scheduled in advance, whereas others occurred "on the run"—in the lunchroom, restroom, or in the halls throughout the school day. They tended to focus on immediate concerns regarding individual children and their progress in reading. Some examples included: meetings between teachers and their paraprofessionals; meetings between the two multiage grade 1-2 teachers to plan shared afternoon centers; and meetings between the special education teacher and the reading specialist to discuss special education students.

## Professional development

Training and professional development were highly valued at Emerald. This view began with the principal, who noted that "professional development is critical for me. I believe in it, I believed in it as a teacher, I believe in it as an administrator. That sometimes directs the kinds of things that we do next as a staff." The principal considered it part of her responsibility as an administrator to be involved in ongoing professional development. She described her recent participation in an Association for Supervision and Curriculum Development conference as an opportunity to expand her understanding of curriculum integration. This topic was the focus of a major project at Emerald at the time.

Each of the teachers that we interviewed spoke of the principal's support for professional development. A kindergarten teacher reported that each staff member was able to participate in several professional development activities during the year. "If I see something that appeals to me, I just drop the principal a note . . . she's never turned me down. She's very open to that."

A sizeable portion of the professional development activities was directly related to instructional practices at Emerald. In the early reading program, two teachers described training in Project READ, and two teachers had attended training sessions on Reading Recovery strategies. The Reading Recovery teacher reported ongoing training as part of a regional group of Reading Recovery teachers. All of the early reading teachers participated in extensive training associated with the reading series adopted in 1997-98.

Mentoring was mentioned by a number of teachers in their interviews as an ongoing professional development practice. New teachers at Emerald were paired with more experienced staff members for assistance in implementing local practices. However, newer teachers got assistance from many sources in the school. As the special education teacher put it, teachers "don't hesitate to ask somebody else [and others don't] hesitate to help them out. . . . It just very much is a cohesive staff."

Experienced teachers at Emerald also learned a lot from each other. One of the multiage 1-2 teachers reported being mentored by the reading specialist on selected Reading Recovery techniques. She described this mentoring as enabling her to implement some Reading Recovery strategies with struggling readers that she tutored after school. She was not the only teacher to refer to her peers as providing guidance and "mentoring."

Teachers at Emerald also reported numerous instances of more traditional professional development activities. A substantial number of teachers held master's degrees in areas like reading, elementary education, or special education, and several teachers reported current coursework at one or more of three nearby universities. For example, one multiage grade 1-2 teacher was enrolled in a course on brain research at a local university. She described the course as contributing to her understanding of the ways children learn as well as stimulating her to think of new strategies for reaching struggling readers. Teachers also reported being active in professional organizations, in particular the national and state chapters of International Reading Association and the National Association for the Education of Young Children.

A few teachers reported using the Internet to expand their knowledge. One multiage 1-2 teacher described a project during the previous year that focused on computer literacy. The school was expecting to receive a donation of used computers for classroom use. Through an Internet search, they identified instructional programs to use in their classrooms, found potential training sites, and participated in chat rooms to question more experienced technology users. At one point, several staff members were bringing material on computers and software to school on a regular basis.

### Collaboration

The staff at Emerald collaborated frequently on tasks within the school. This internal collaboration was closely linked to the planning and management mechanisms and the professional development activities described above. Among the early reading staff, the reading specialist stated that "we're kind of all on an equal footing; we very much respect where everyone is coming from. There's a lot of reading background on our early elementary staff, particularly among the teachers who have been here for awhile.... so we work more as a team that way."

Collaboration within the school was manifested by their willingness to work together toward a common goal—even when it meant an uneven distribution of resources. For example, in implementing the literacy rotation, first-grade teachers proposed that one paraprofessional be allocated to each first-grade classroom, which required that the upper-grade teachers have fewer than one per classroom. The plan was agreed to because the expectation was that students who stayed at Emerald would be better prepared when they got to the upper grades.

Emerald school also entered a series of collaborative arrangements with local universities and other agencies. For example, the Motivation Project and the School Improvement Project (see Table 3) represent extended collaborations with two separate universities that had direct impact on the early reading program. The Motivation Project brought specialized training in conflict resolution and awareness of learning styles to Emerald's staff. This project shifted the way in which the school recognized students for academic and social achievements. For example, they abandoned their traditional honor roll in favor of making awards to every student for the tasks that they had accomplished.

The School Improvement Project was credited with introducing a number of innovations that have contributed to the school's improved achievement. The principal reported that both the decision to use multiage grouping and the decision to address student retention arose in the School Improvement Project.

### Federal/state-driven initiatives

Finally, each of the interviews described federal and state initiatives that influenced the early reading program. At the time of the interviews, the staff was actively involved in aligning the school curriculum with state standards for English and language arts. In another example, the Title I teacher, as part of a state initiative, was working on strategies for improving comprehension of informational texts.

The implementation of a schoolwide Title I program in 1995-96 seems to have been especially influential in program decisions. This shift in resource use paved the way for the literacy rotation. In the words of the principal, the schoolwide Title I program allowed them to be more "creative."

# Findings

## Key Elements of School Operation

Emerald is a high-poverty school that is demonstrably effective in teaching children to read. From interviews and observations, we identified five key elements of school operation that appear to be, in part, responsible for that success. Before describing these elements, it may be useful to reiterate just how complex contemporary American public schools are. There are a host of factors that, either singly or in combination, can have substantial effects on the operation of individual schools.

The factors that have been identified at Emerald are by no means independent. Rather they represent one way of describing a web of interrelated influences within the school. This interdependence also makes it difficult to suggest a rigid order in the factors or a pattern in their relative influences. In the previous sections of this report we attempted to stay relatively close to the data. Descriptions of the key elements of school operation, though still based on interview and observation data, also include somewhat more interpretation. Although there has been relatively little research on early reading programs in high-poverty schools beyond those that focus on instructional interactions within classrooms, the elements identified here are compatible with research over the last two decades on effective schools and schools as organizations.

### 1. Focus on student learning outcomes

Emerald placed its primary emphasis on student learning outcomes. This pervasive emphasis can be seen in a variety of ways. At Emerald, student learning appeared to be the higher priority when compared with curriculum and instruction. That is, if a student did not respond well to a particular reading method, then a second (or third) method was tried. The point is that the faculty were not satisfied by presenting a particular method of reading; they allowed student learning to dictate how to proceed.

In some schools, the staff takes instruction as their ultimate responsibility. In such schools, there seems to be a stronger commitment to teaching method than to student learning, for it is implied that the student is at fault if he or she does not learn from the initial instruction. The standard response to this situation is to repeat the same treatment. At Emerald, on the other hand, the staff appeared to approach struggling readers with an attitude of problem-solving. They continually worked to find ways for students to learn, rather than assigning blame or accepting failure. This approach to early reading instruction and early readers contributed in large measure to the focus on student learning outcomes that characterized the school.

The focus on student learning was supported by a general school climate that was oriented toward learning. In the early reading program, this translated to an expectation that students will learn to read. Interactions among staff members, among students, and between staff and students led us to believe that the climate of the school was safe and caring. Students entering the school office, for example, were acknowledged quickly and treated in a businesslike manner. Students' concerns, whether academic or social, were treated with respect. This sense of social responsibility was reinforced, and perhaps partly brought about, by an active schoolwide program on conflict resolution.

### 2. Use of multiple reading programs in every classroom

In addition to the ongoing reading instruction during morning activities at Emerald, the staff went to great lengths to make a variety of reading programs available to students in almost every classroom. For grade 1 students, the literacy rotation was a fundamental structure for meeting individual student needs. As described earlier, this innovative arrangement brings four instructors (and four small-group reading approaches) to each classroom with grade 1 students for two hours every week. Consequently, students can be moved from one approach to another quickly and easily without changing class membership. This flexibility offered direct benefits to students in the form of more opportunities to learn to read. Literacy rotation offered indirect benefits as well, since it created an efficient forum for teachers to learn about the reading performances of a variety of students and a mechanism for communicating with each other about struggling students. This latter theme will be explored further in the next section.

The availability of multiple reading programs was by no means restricted to literacy rotation. Even in grade 1, there were alternatives available beyond the time spent in literacy rotation. Classrooms at the lower grade levels had paraprofessionals throughout the morning, allowing differentiation of instruction for an extended period of time. Small numbers of students were also selected for the Reading Recovery program or for tutoring after school.

Beyond grade 1, there continued to be provisions for multiple reading programs in most classes. For example, a Title I teacher worked in grades 2 and 3 to provide instruction on informational text. There was also an after-school tutoring program for fourth-grade students in preparation for the state-mandated reading test.

The provision of multiple reading programs meant that a student might work with more than one teacher during the same day or week. For this practice to work well, teachers must communicate with one another and respect orientations to reading instruction that may differ from their own. The faculty at Emerald had expanded their knowledge of a variety of approaches to reading instruction and took a remarkably pragmatic view of instruction. This juxtaposition of very different reading programs without lingering ideological disputes attested both to the focus on student learning outcomes over instructional differences and to the maturity and competence of the staff.

Although a range of programs was available to students, one should not get the impression that either individual programs or the set of programs was static. For example, the literacy rotation was only in its third year of operation, and it had evolved somewhat over that period. The new textbook series also brought changes to instructional practices at Emerald. The program focusing on informational text was implemented in 1998-99 after an analysis of recent statewide reading test data. This willingness to modify the program structure may be another expression of the school's focus on student learning as opposed to an ideological commitment to a particular instructional method.

### 3. Shared responsibility for student success in reading

At Emerald, responsibility for student success in reading was shared among several teachers. At first glance, this statement could perhaps be made about every elementary school in America. But in most schools, responsibility is primarily shared in serial fashion. That is, the kindergarten teacher hands students off to the grade 1 teacher, the grade 1 teacher hands them off to the grade 2 teacher, and so on. In such schools, individual teachers bear primary responsibility for students one year at a time. If supplementary programs operate as relatively independent pull-out programs, and if students tend to stay in programs for a year at a time, then there are seldom venues for several teachers to consider an individual student's progress at any given time. Too often the only opportunity for supporting a struggling student may be having the student repeat the whole year's treatment. At Emerald, classroom teachers took primary responsibility for students in much the same way, and in multiage classrooms a given student was likely to stay with the same teacher even longer (two years). However, at Emerald, this basic structure was combined with a second structure that cut across classes and brought students into contact with more than one teacher as much as four times a week. The literacy rotation and informational text programs operated in this manner. These programs resulted in teachers having contemporaneous experience with students in their regular classrooms and, with biweekly meetings to discuss individual cases, allowed struggling readers to be identified and supported relatively quickly. At Emerald, teachers appeared to know who was getting along well and who was struggling within the current cohort of students.

Although the literacy rotation was a prominent mechanism for sharing responsibility for students learning to read, Emerald had several other mechanisms in place. A series of formal and informal meetings, including staff meetings, grade-level meetings, curriculum alignment meetings, and the School Improvement Team, contributed to this key element of school operation. As one teacher put it, these mechanisms prevented students from "falling through the cracks. . . ." High levels of shared responsibility do not come easily, since staff members must have high levels of trust and view their tasks as cooperative. Some of the conditions underlying the ability to share responsibility are developed further in our discussion of the fourth and fifth key elements of school operation.

### 4. Strong leadership at both school and classroom levels

The pattern of leadership in the reading program at Emerald was complex. The environment encouraged risk-taking, and planning was more often proactive than reactive. Although there was no doubt that the principal provided much of the leadership for the school, teachers, through their knowledge and expertise, participated in many decisions. At Emerald, everyone was working toward a common goal—the successful reading achievement of all children.

The principal exerted a major influence on the school through her leadership of the School Improvement Team. The principal chaired this group, and all major changes in the early reading program were considered and approved by it. The principal's long-standing commitment to the local community helped create a strong link to the district that, in turn, allowed the early reading program to develop and grow.

All seven of the teachers that we interviewed named the principal as the school's primary leader. She was described as pragmatic in her approach to problem-solving and involved her staff in most decisions. Some decisions, such as budget and hiring, were made by the principal with advice from the staff. The principal also had the final say on assignment of students to classes. The reading specialist reported that leadership "truly comes from the principal. . . and [that] she expects nothing less from herself than she expects from the staff, but she expects a lot." Having taught under the principal previously, the special education teacher moved from a nearby district when she learned of an opening at Emerald, just to work with the principal again.

Teachers described the principal as being flexible, a risk-taker, someone who encourages creativity and freedom while demanding excellence, and someone who allows mistakes and shares the responsibility for both failures and successes. The principal delegated authority to teachers and acknowledged them as educational leaders. She provided them with the time and funds to attend self-selected workshops and training programs. She validated their knowledge by providing them with opportunities to lead staff meetings and mentor less experienced colleagues. Teachers were often provided with resources to carry out ideas that they brought to the principal. The development of the all-day kindergarten and implementation of Project READ were two such cases.

Although the principal provided strong leadership, numerous staff members also contributed to the program. Emerald teachers had many opportunities to take leadership responsibilities. As noted earlier, several teachers were instrumental in leading meetings, mentoring less experienced staff, and initiating new elements of the reading program. Teachers at Emerald also had leadership opportunities outside the school itself. Some teachers led workshops for other teachers in the district, and there were several examples of teachers making presentations to the school board and to local businesses.

Teachers expressed a sense of self-efficacy at Emerald. They saw their ideas supported from initial suggestion to actual implementation. They were supported in their academic pursuits and given a voice in decision-making. At Emerald, teachers could focus on teaching and see the fruits of their labors. One teacher remarked that quite a few people stayed at Emerald because they could "see an incredible need and say to themselves, I probably make the difference."

The principal was respected within the district and, as a result, was allowed to take risks with innovative programs. She knew how to work within her district's system and made use of this knowledge to support teachers in their endeavors. She took a firm hand in leading the school while admitting that she may not know all the answers.

5. Veteran staff that is knowledgeable, coherent, and committed

The staff of the early reading program has extensive experience in schools and in teaching children to read. As noted earlier, five of the seven teachers that we interviewed had master's degrees, and as a group they averaged 17 years of teaching experience. The staff was knowledgeable about many of the frameworks and models for teaching early reading. Several teachers had extensive training in particular methods, including Reading Recovery and Project READ.

The core group of the early reading staff had spent approximately 10 years working together. They knew each other's strengths and weaknesses. Over this period, the core group developed a certain cohesiveness in their overall program. Although there were differences among teachers in teaching style, the group's commitment to student learning helped them avoid ideological pitfalls. Coherence in the staff was also supported by their common view of reasons for reading failure. The staff did not perceive reading problems to be located in individual children, but rather in the programs and instructional strategies employed to help children learn to read. The literacy rotation, with its biweekly meetings, illustrated a shared commitment to student learning outcomes and the acceptance of varied instructional styles. Their willingness to change instruction for students demonstrated that they were not locked into a "one size fits all" solution.

The staff reported that they perceived themselves as a "family" with shared responsibilities. During interviews, several teachers mentioned that, as a family, they were free to disagree with one another on particular issues but eventually arrived at consensus because of their shared goals.

The early reading staff could be described as good educational consumers. Though they were willing to take risks with changes in instruction and programming, changes were not taken lightly or made haphazardly. Instructional and programmatic choices were usually made after consulting several sources about the value of a variety of alternatives.

## Implications for Resource Allocation

Emerald School has developed a successful early reading program. A large portion of its students learn to read and perform well on state reading measures. We have provided a brief description of the day-to-day operation of the program; various mechanisms for program planning, management, and development; and five key elements of school operation. We now reexamine these mechanisms and elements in light of their implications for resource allocation.

Ongoing leadership

It is difficult to imagine the success of the early reading program (and of the school as a whole) without the strong leadership of both the principal and the core of mature, knowledgeable, coherent, and committed staff. It is unlikely that any resource allocations would have had these same effects if the vision and the ability to implement it had not already been in place. Individual members have joined or left the staff in the past few years, but a cadre of competent action-oriented educators has been at Emerald for some time.

Emerald's principal played a very substantial part in the school's development. She has been at Emerald as principal for 19 years. Presumably, this talented educator has had any number of opportunities during that time to take on other roles, with greater power and larger budgets, in the educational hierarchy. Whatever the reasons, this person made a commitment to the principalship of this school and provided Emerald with competent and stable leadership. Her extended tenure as principal allowed time for the relatively slow process of building a strong faculty. Since the principal had considerable control over local hiring, it is reasonable to expect that she was influential in attracting and developing the competent staff that is the mainstay of the school.

There are several points here. First, principal leadership is deemed to be critical for programmatic development of early reading. Second, in this case, a strong principal was in place for an extended period of time. Third, the development of a mature, knowledgeable, coherent, and committed faculty takes years to accomplish. At least some of these conditions may be prerequisites for effective use of added resources in a school if and when they become available.

### Implementing the schoolwide Title I program

In our analysis of Emerald's early reading program, the literacy rotation was a critically important structural innovation. It helped move the school beyond having a strong collection of classroom-based reading activities to having a program that reached across classes and placed all early readers in a dynamic interrelated set of carefully monitored instructional options. The literacy rotation was made possible by the opportunities and resources that became available when Emerald qualified as a schoolwide Title I school in 1995-96.

This event appears to be a watershed in the recent history of Emerald because it brought new resources to the school and allowed them to benefit the entire school. Subsequent results on state reading measures provide evidence that the early reading program improved. Though becoming a schoolwide Title I program enabled the school to perform better, we believe that Emerald was in excellent position to take advantage of its new opportunity because of the preparatory work done in the preceding years. In this somewhat longer time frame, the ongoing leadership of the principal and development of school faculty take on added importance. It is highly unlikely that the Title I award would have made such a difference in so short a time if extensive faculty development had not preceded it.

### Staff agreement on the importance of early reading

Implementation of the literacy rotation resulted in an allocation of more resources to early elementary grades than upper elementary grades at Emerald. Literacy rotation allowed for smaller instructional groups during part of the school day for students in grade 1 and some students in grade 2. This of course meant that, on average, ratios of students to teachers in the upper grades would be higher for at least a portion of the school day. A majority of the faculty agreed on the importance of early reading and expressed the expectation that more resources in early reading would translate to better readers entering the later grades. This decision would not have arisen but for the opportunity presented by the schoolwide Title I status; however, the decision also attested to the level of trust and cooperation in the faculty before the Title I award.

### Adoption of multiple class types

Emerald's adoption of multiple class types predates the Title I award by several years. This adoption was encouraged by the local school district and was accompanied by additional funding for its support. Multiple class types allowed Emerald more flexibility in a number of areas. For example, parents could be offered a choice of class types and students could be assigned to classes without forcing a single norm for rate of learning on all students. Experienced teachers are well aware that students often show discontinuities in growth rates in school, with some students going through a series of spurts and plateaus that are not necessarily aligned with traditional grade boundaries.

### Collaboration with local universities and other agencies

Emerald has had a history of collaborating with local universities and other agencies, including state and federal education agencies. Several of these relationships have been multiyear efforts. Through these collaborations, Emerald has augmented its own supply of ideas and strategies for solving problems that arise in the school. In some cases, collaboration has brought financial resources to the school, but in all cases, Emerald got access to free expertise that it would not otherwise have had.

## Summary

This report on Emerald School is the first in a series of six case studies of early reading programs in high-performing, high-poverty schools. Over the past three years, Emerald has performed above or near its state average on reading achievement. During this time, the school has had half of its students eligible for free or reduced lunch, and its mobility rate among students has been approximately 40%. This extraordinary achievement places Emerald among the top performing high-poverty schools in its state.

Emerald has three types of classes—single-grade, split-grade, and multiage. The cornerstone of the early reading program is referred to as a literacy rotation in which all grade 1 students have access to four small-group instructional approaches for two hours per week. Beyond the literacy rotation, a variety of safety nets for dealing with struggling readers were observed. The school has several mechanisms in place for facilitating communication among the staff (about reading performance and broader issues), professional development, collaboration, and addressing state and federal schooling initiatives.

Analysis of Emerald's early reading program identified five key elements of school operation: focus on student learning outcomes, multiple reading programs in every classroom, shared responsibility for student success, strong leadership at school and classroom levels, and a veteran, knowledgeable staff. These elements were related to resource allocations within the school.

In describing Emerald School, it may be useful to mention several factors that, though not necessarily absent from the school, played either a marginal or no role in the early reading program. Technology did not have a significant role in early reading or writing programs. The school was not wired into either local- or wide-area networks. There were two stand-alone computers in most classrooms and, in most cases, they had software that was used for literacy instruction. Although there were occasional volunteers in the school, there was no systematic use of volunteers in the early reading program. Parents were not present in classrooms as a regular feature of the early reading program. Although the school received valued help from the district Title I coordinator when Emerald initiated its schoolwide program, the local district was not the primary source of major initiatives that shaped the early reading program. The district was not a major source of innovation and change at Emerald, but it was not a barrier to school-based initiatives, either. During the 1990s, Emerald has not had significant grants from non-governmental agencies that would make the average expenditure per pupil radically different than those of surrounding schools. Although there may be other factors that went undetected, the high level of performance in the early reading program at Emerald appears to arise, in large part, from the five key elements of school operation.

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# Author Note

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# Notes

1. The NAEP data distinguish between those eligible for free or reduced cost lunch and those who are eligible for neither. The national criteria for free or reduced cost lunch are generated each year by the Department of Agriculture and vary depending on family size. For example, the criteria for free and reduced cost lunch for a one-child family were $10,712 and $15,244 respectively for the 1999-2000 school year. These figures were approximately $250 higher than analogous figures for the previous school year.

2. Whereas there are large differences in per pupil expenditures from state to state and from district to district, there are very small differences between schools within districts. By looking at schools within districts (or between districts with similar per pupil expenditures), the presumed effects of differences in funding level can be minimized.

3. Emerald is an alias.

4. The term "reading program" is used in at least three ways in this report. In a few cases, it refers to the instructional materials and procedures associated with a particular publisher or developer. In the second meaning, it refers to the instructional materials and procedures used in a classroom, which may include one or more sets of publishers materials. The third sense refers to the instructional materials and procedures, organizational arrangements, professional development plans, and safety nets for struggling readers that constitute the early reading platform in a school. We use the term most often in this latter sense. Where the meaning of the term is not clear from the context, we attempt to avoid ambiguity by using phrases like publishers reading program, classroom reading program, or schoolwide reading program to distinguish them.

5. Readers of this report may be interested in another CIERA research effort led by Barbara Taylor and David Pearson which examines both classroom- and school-level factors in elementary schools with successful reading programs (Taylor, Pearson, Clark, & Walpole, 1999).

6. The procedure was somewhat different in California since there was no single reading measure used statewide for the period we were interested in. In this case, we relied more heavily on district testing data, various school recognition systems, and expert recommendations.

7. The survey of early reading practices required a total of approximately four hours per school to complete. At each school, the principal and six teachers chosen by the principal as key members of the early reading program completed the survey.

8. Paraprofessionals provide information on the children in their groups to the classroom teachers for this meeting. The paraprofessional stays with the whole class during these thirty minute bimonthly sessions.

# About CIERA

The Center for the Improvement of Early Reading Achievement (CIERA) is the national center for research on early reading and represents a consortium of educators in five universities (University of Michigan, University of Virginia, and Michigan State University with University of Southern California and University of Minnesota), teacher educators, teachers, publishers of texts, tests, and technology, professional organizations, and schools and school districts across the United States. CIERA is supported under the Educational Research and Development Centers Program, PR/Award Number R305R70004, as administered by the Office of Educational Research and Improvement, U.S. Department of Education.

***Mission.*** CIERA's mission is to improve the reading achievement of America's children by generating and disseminating theoretical, empirical, and practical solutions to persistent problems in the learning and teaching of beginning reading.

## CIERA Research Model

The model that underlies CIERA's efforts acknowledges many influences on children's reading acquisition. The multiple influences on children's early reading acquisition can be represented in three successive layers, each yielding an area of inquiry of the CIERA scope of work. These three areas of inquiry each present a set of persistent problems in the learning and teaching of beginning reading:

**CIERA INQUIRY 1**
Readers and Texts

***Characteristics of readers and texts and their relationship to early reading achievement.*** What are the characteristics of readers and texts that have the greatest influence on early success in reading? How can children's existing knowledge and classroom environments enhance the factors that make for success?

**CIERA INQUIRY 2**
Home and School

***Home and school effects on early reading achievment.*** How do the contexts of homes, communities, classrooms, and schools support high levels of reading achievement among primary-level children? How can these contexts be enhanced to ensure high levels of reading achievement for all children?

**CIERA INQUIRY 3**
Policy and Profession

***Policy and professional effects on early reading achievement.*** How can new teachers be initiated into the profession and experienced teachers be provided with the knowledge and dispositions to teach young children to read well? How do policies at all levels support or detract from providing all children with access to high levels of reading instruction?

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