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EARLY READING INTERVENTION FOR ENGLISH LANGUAGE LEARNERS AT-RISK FOR LEARNING DISABILITIES: STUDENT AND TEACHER OUTCOMES IN AN URBAN SCHOOL

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Abstract. Student and teacher outcomes following the first year of implementation of an early reading intervention project designed to improve literacy outcomes in one urban school are described. The intervention was delivered through ongoing supplemental reading instruction for English language learners (ELLs) at-risk of reading failure. Students at-risk for reading-related learning disabilities were identified using the *Dynamic Indicators of Basic Early Literacy Skills* (DIBELS), a performance-based reading assessment. Students at-risk and students with learning disabilities (LD) received supplemental small-group reading instruction provided by the classroom teacher and support personnel implementing an inclusive special education program. Results indicated positive growth for ELLs, with a disproportionately large percentage of students falling into the risk range. At-risk and LD students showed steady improvement, supporting the coupling of an inclusive special education program with reading intervention in the primary grades. Teacher reports indicated that professional development should be grounded in the reality of classroom experience.

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Recently, the failure of many children to develop early reading skills that lead to academic and social success has led to national concern. Poor reading skills lead to lower overall academic achievement and first grade seems to be a critical developmental period (Chall, 2000; Juel, 1988). Multiple and complex factors contribute to poor reading outcomes in urban schools, including a lack of qualified teachers and students who come from poverty (Snow, Burns, & Griffin, 1998). Students who experience early reading difficulty often continue to experience failure in later grades and later in life. Stanovich (1986) describes the "Matthew Effect," a "the rich get richer while the poor get poorer" phenomenon, wherein those who acquire early literacy skills have the tools to exponentially grow in their knowledge and skills while those who fail to develop early skills fall further and further behind. By the later elementary years, those who experience severe reading failure are often given a learning disabilities (LD) label and placed in special education services.

English language learners (ELLs), or students whose primary language is other than English and are learning

English as a second language, often experience particular challenges in developing reading skills in the early grades. According to the 1996 U.S. Census data, approximately one third of California's population is of Hispanic origin. In addition, 25% of California's K-12 students are limited-English proficient, and 80% of these students speak Spanish as their primary language (Gándara, 1997). With the passage of Proposition 227 in California requiring mandatory English language instruction in the public schools unless the parents specifically request native language instruction, the implementation of effective strategies to teach reading skills while supporting second-language learning has become a paramount concern. Conducting instruction in English, regardless of whether it is students' native language, makes it critically important to develop strategies for addressing English Language Learner (ELL) students' unique literacy learning needs. There is a considerable urgency to develop teaching strategies for all students within English immersion programs and provide appropriate professional development for teachers.

Of particular interest to this study were intervention strategies for ELL students showing early signs of reading failure and being identified as having learning disabilities and the resulting professional development concerns of teachers. There is little agreement in the research literature on how to effectively teach reading to ELL students (Gersten & Baker, 2000). Continued research efforts must specify how best to provide intervention for students at-risk for reading difficulties.

Professional development for teachers is a key ingredient in improving reading outcomes and preventing reading difficulties. "Continuing professional development should build on the preservice education of teachers, strengthen teaching skills, increase teacher knowledge of the reading process, and facilitate integration of newer research on reading into the teaching practices of the classroom teacher" (Snow et al., 1998, pp. 290-291). However, "one-shot" workshops generally fail to deliver effective research-based strategies to classrooms (Gersten, Morvant, & Brengelman, 1995). Even when teachers adopt research-based practices, they do not sustain use without significant followup training and ongoing, personalized support (Gersten et al., 1995; Gersten, Vaughn, Deshler, & Schiller, 1997; Schumm & Vaughn, 1995).

Critical to this project was the design of professional development that would lead to teacher expertise in reading intervention strategies for at-risk students, incorporating sound pedagogical strategies for teaching ELL students. Of particular concern was how to support both novice and experienced teachers given the large number of inexperienced teachers at the participating school site.

KEY COMPONENTS OF AN EARLY READING INTERVENTION PROGRAM

Assessment

Ongoing assessment that provides teachers with clear information about students' performance levels and progress is an earmark of an effective reading intervention program. Assessment serves three important purposes in developing a reading intervention program: (a) identifying students in need of supplemental instruction, (b) guiding instructional planning, and (c) monitoring student progress. Assessments that are predictive of later reading outcomes are helpful in identifying students who are in need of supplemental intervention (Kaminski & Good, 1996; Torgesen, 1998). Measures of phonemic awareness strongly predict young children's future success in learning to read or, conversely, the likelihood that they will fail (Adams, 1990; Stanovich, 1986).

Assessment should also guide instruction. Assessment tools that reflect the most important aspects of the grade-level curriculum provide information about how an individual student performs within the classroom context. In other words, "a student's performance on various reading and writing measures is considered an indication of what he or she can and will do under a specific set of conditions, rather than a set of fixed abilities and disabilities" (Lipson & Wixson, 1997, p. 57). This type of assessment readily translates to planning instruction to meet specific student needs.

Finally, assessment tools that represent particular requisite skills are very useful in monitoring individual students' progress. Ongoing and frequent assessment provides teachers with current, practical information to guide their further intervention (Deno, 1997; Fuchs, 1989).

Emphasis on Essential Reading Skills

Simmons and Kameenui (1998) describe the "big ideas" of reading as the most essential concepts and principles in reading acquisition. In beginning reading, the three "big ideas" are phonological awareness, alphabetic principle and fluency with connected text. *Phonological awareness* is the understanding of the different ways that spoken language can be broken into smaller components. An important element of phonological awareness is phonemic awareness. Phonemic awareness is the ability to focus on and manipulate the individual sounds, or phonemes, in spoken words. This kind of understanding of the sound structure of the language facilitates acquisition of the second "big idea," the *alphabetic principle*. This principle involves learning the code of the alphabetic system, or the letter-sound correspondences and spelling patterns, and applying this knowledge in reading text. Lastly, *fluency with connected text* represents a level of expertise beyond the

alphabetic code. According to Snow et al. (1998), adequate progress in learning to read English (or any alphabetic language) beyond the initial level depends on sufficient practice to achieve fluency, or automaticity, with different texts. More than 20 years of research have demonstrated the important connection between the development of phonemic representations and fluent reading (Naslund, 1997). LaBerge and Samuels (1974) state that for a fluent reader, the process of reading the written word takes only a fraction of a second, and it takes many years to become a fluent reader.

English Language Development for ELLs

What we know about effective instructional practices for English language learners, particularly in the area of reading, is fraught with conceptual differences and a fragmented knowledge base. Gersten and Baker (2000) culled a wide range of literature sources and convened focus groups to derive a set of instructional guidelines for teaching ELL students. They identified five elements of effective instruction for ELL students: (a) building and using vocabulary as a curricular anchor; (b) using visuals to reinforce concepts and vocabulary; (c) implementing cooperative learning and peer-tutoring strategies; (d) using native language strategically; and (e) modulating cognitive and language demands. Vocabulary development is a critical element of an effective English immersion program where reading instruction occurs in English simultaneously with English language development. Thus, vocabulary development must be integrated with all aspects of the instructional program.

DESCRIPTION OF PROJECT PLUS

Project PLUS (Partnership Linking University School Personnel) was designed to join university and school personnel in a collaborative effort to improve reading outcomes for ELL students at-risk for experiencing reading failure and being placed unnecessarily into special education. An urban school was selected as a partner because it embodies the complexity of the harsh realities facing teachers in urban schools today such as poverty, low levels of literacy, community difficulties such as gang activity and difficult living conditions, and poor health and educational outcomes for students. Under pressure to improve education against great odds and bombarded by a vast menu of reform initiatives and mandates, the urban school described in this study reached out to the neighboring university for training and support. At the same time, internal reform efforts within the university led to heightened emphasis on directly involving teacher educators in improving the urban schools it serves. University and school personnel agreed that professional development for teachers would be the appropriate vehicle for school

improvement because over half of the classroom teachers lacked experience and credentials, hired on an emergency status to fill vacancies.

PROJECT CONCEPTUALIZATION AND PURPOSE

The primary goal of Project PLUS was to develop a model of early literacy intervention for ELL students who are likely to be identified as having LD. Project PLUS provided ongoing professional development for teachers in the form of intensive workshops followed by classroom-based coaching and consultation. Four principles guided the conceptualization of this project:

- University-school collaboration is essential for improving both teacher education and school practice.
- Schools and universities need to foster general and special education collaboration.
- Early intensive remedial intervention in basic skills is essential to improving achievement outcomes.
- Family involvement in literacy practices is essential to improving literacy outcomes.

The purpose of this study was to examine the outcomes of the first year of a professional development project to improve early reading intervention practices for first- and second-grade teachers in an urban school. The following research questions were addressed:

- What were the reading outcomes for first- and second-grade ELL students in general?
- What were the reading outcomes for first- and second-grade students with LD, at-risk students who received intervention, and students not identified as at-risk?
- What was the nature and extent of teachers' implementation of a reading intervention for students at-risk for reading disabilities?

METHOD

Participants

Participants included 335 students in an urban school that primarily serves ELL students and their 17 first- and second-grade teachers. The school exemplifies a typical urban, Hispanic school in this district in several ways. It is large, with almost 1,200 students in grades pre-K through eighth grade. To alleviate overcrowding, the school operates on a multitrack rotating schedule with two-thirds of the students and teachers "on track" at any given time and one third "off-track." The school houses a small middle school as an alternative to the large, neighborhood middle school. The student ethnic distribution is 98% Hispanic, 1.9% white, .1% other. Over 70% of the students were designated by district guidelines as limited-English proficient while 80% of the students' parents reported that Spanish was the students' primary language. Due to a state mandate to

Table 1

Description of Student Sample

	1st Grade		2nd Grade		LD Students
	N	%	*N*	%	*N*
Male	77	49.4	91	50.8	20
Female	79	50.6	88	49.2	11
Ethnicity					
Hispanic	132	83.0	162	90.5	29
Caucasian	1	.6	0	0	0
African American	0	0	1	.6	0
Asian	1	.6	3	1.7	0
Native American	0	0	1	.6	0
Primary Language					
Spanish	121	77.6	146	81.6	22
LD Designation	7	4.5	24	13.6	31
Attended Pre-K	10	6.8	13	7.2	2

Note. Information gathered from school records. Percentages within a category do not add to 100% because of missing data in school records regarding ethnicity and primary language. Actual incidence of Hispanic ethnicity and Spanish as primary language may be higher than indicated.

reduce class size in the primary grades, there were no more than 20 students in each classroom.

Students. A total of 335 students, including 156 first graders and 179 second graders, participated in this study. Table 1 lists information that was available from school records regarding gender and ethnic classification of students at each grade. In addition, the table provides information about students' language status in primary and secondary languages. It is important to note that school records rely on parent report for ethnicity and language issues and these records are incomplete in many cases, according to the school administrators and teachers.

Students who were designated as having a learning disability and were served by the school's special education program received services from a credentialed resource specialist. These students qualified for services on the basis of the district's criteria: a severe discrepancy of at least 1.5 standard deviations between their cognitive performance and a standardized achievement test, and evidence of a processing disorder. In addition, there must have been evidence that achievement difficulties were not due to some other condition. There were 7 first grade students with learning disabilities (LD) and 24 second graders. Additional characteristics of the students with LD are included in Table 1.

All LD students received reading/language arts instruction in the general education classroom in an inclusion model in which the resource specialist and her aide provided services. The resource specialist worked with LD students in small groups or individually. In all cases, the reading instruction provided by the resource specialist was *in addition to* the reading instruction of the entire class. Some LD students also received an additional period of reading instruction from the classroom teacher during time designated for intervention.

Teachers. A total of 17 teachers were included in the teacher sample. Participation in the professional development was voluntary, but implementing intervention for at-risk students was mandatory. Table 2 contains teacher characteristics. It is important to note some demographic patterns that characterize the teacher population in this urban school. First, about half of the teachers at each grade level held only an emergency permit to teach, meaning that they had a Bachelor's degree and had passed a basic academic skills competency test required by the state. The district required that teachers with emergency permits be enrolled in a teacher credential program and complete a minimum number of credits per year to renew the permit. Several of the teachers in this sample had been teaching for three or more years, taking only the minimum coursework, thus extending their emergency permit period.

Most of the teachers were bilingual and native Spanish speakers and had varying levels of English proficiency.

Measures

Ongoing, qualitative and quantitative information was gathered throughout the academic year to evaluate and refine the professional development program as well as to further the project's efforts to develop effective reading intervention strategies for students at-risk for reading difficulty. Information was gathered regarding student progress and teacher participation.

Student data sources. Students' early reading skills were assessed using the *Dynamic Indicators of Basic Early Literacy Skills* (DIBELS) developed by Kaminski and Good (1996). DIBELS is a set of tasks designed to assess students' fluency with fundamental reading skills. The DIBELS tasks represent constructs that could be described as a progression of the foundational skills of early reading. These skills are prerequisite to reading success (Good, Kaminski, & Hill, 2000). The skill areas assessed include phonological awareness, alphabetic principle (letter-sound relationships), and fluency with connected text. The score for each task reflects the number of correct responses given in a timed minute. Table 3 provides information about the DIBELS sub-tests used in this study, the foundational skill area represented by each subtest, and the benchmark score that would indicate fluency with the skill. The DIBELS subtests were selected because of their predictive qualities. Tasks such as rapid letter naming and phoneme segmentation are known to be highly predictive of later reading outcomes and are represented in DIBELS (Adams, 1990; Good, et al., 2000). Thus, this measure is particularly useful in identifying students at-risk for reading failure for intervention purposes, which was the primary purpose in this study.

Assessment was conducted using the following subtests: Phoneme Segmentation Fluency (PSF), Nonsense Word Fluency (NWF), Oral Reading Fluency (ORF), Letter Naming Fluency (LNF) and Word Sentence Fluency (WSF). PSF measures a student's ability to break apart a word by pronouncing each phoneme in isolation. The examiner would say the word "Sam" and the student would respond with /S/ /a/ /m/. The score for this measure represents the number of phonemes said aloud in a 1-minute period with the first-grade benchmark at 35-45 correct phonemes per minute expected to be reached by the beginning of first grade.

NWF measures decoding skills, in which the student reads short vowel nonsense words, either sound by sound or whole word. As an example, the examiner would present the nonsense word "sim" and the student would either read each individual letter sound, /s/ /i/ /m/, or the whole word. The score for this measure represents the number of letter sounds read in a 1-minute period with the first-grade benchmark at 40 correct letter sounds to be reached by the middle of first grade.

ORF measures oral reading fluency on a 1-minute timed measure. The student is presented with a grade-level passage and reads continuously for a 1-minute period. The score represents the number of correct words read per minute with a first-grade benchmark at 40 words read correctly in one minute. The second-grade benchmark is set at 80 words read correctly in 1 minute.

LNF measures rapid letter naming, a skill thought to be highly predictive of later reading outcomes. The student is given a page with rows of letters, both upper- and lower-case, and is asked to name as many letters as possible within a 1-minute time frame. Forty-seven letters per minute is considered mastery.

WSF is an indicator of language fluency that measures the ability to generate a complete or partial sentence orally when given a word and using it in the correct context. The examiner would say the word "carrot" and the student might respond with the sentence "The rabbit is eating a carrot." The student would receive 6 points for this sentence because it was used in a sentence and in the correct context. The number of

Table 2

Description of Teacher Sample

	1st Grade	2nd Grade
Number	8	9
Years Teaching		
0-2	3	3
3-5	3	2
> 5	2	4
Level of Training		
Emergency Permit	5	4
Elementary Credential	3	5
Credential + Master's	0	0

Note. The values represent the number of teachers at each grade level with the characteristics indicated. Emergency permits allow an individual hired by a school to teach without holding a credential and require a Bachelor's degree plus demonstrated competency on a basic skills test. An elementary credential permits teaching in grades K through 6. Credential + Master's means the teacher holds both a credential and a graduate degree in teaching.

Table 3

Dynamic Indicators of Basic Early Literacy Skills (DIBELS) Subtests, Benchmark Scores, Skills Represented, and Data Point at Each Grade Level

Subtest and Benchmark	Skill Area	First Grade			Second Grade		
		Beg	Mid	End	Beg	Mid	End
Phoneme Segmentation Benchmark: 35-45 phonemes per minute	Phonological Awareness						
Nonsense Word Fluency Benchmark: - 40 sounds per minute	Alphabetic Principle						
Oral Reading Fluency Benchmark: - 40 words per minute by end of first grade - 80 words per minute by end of second grade	Fluency with Connected Text						
Word Sentence Fluency No benchmark established	Oral Language Production						

Note. Shading represents the times subtests were given to students. For example, phoneme segmentation was given at all three data points in first grade but not given in second grade.

correct words are tallied at the end of the test. No benchmark is set for this subtest. Scores were examined across grade levels to choose the bottom 25% of the students who may be at-risk for English oral language fluency and then targeted for intervention.

Teacher data sources. Information was gathered from each participating teacher to evaluate the project on an ongoing basis. Information provided feedback on professional development activities, identified areas of needed support, and documented intervention strategies implemented. Data sources included monthly teacher logs, focus group interviews, and field notes from informal observations and consultations.

In the teacher logs, teachers responded to three questions on a monthly basis:

1. What have you implemented related to intervention during the past month?
2. What has gone well for you related to the intervention this past month? What successes have you had?
3. What challenges have you experienced related to intervention during the month? What questions or concerns do you have?

Focus group interviews were conducted with teachers at the end of the first year of implementation. Teachers participated in grade-level groups and responded to questions about the nature of their students' reading difficulties, the benefits of providing intervention for these students, and the changes they would like to see in the project for the upcoming year. Interviews were conducted by Project PLUS personnel. A final source of data regarding teachers' implementation of intervention for at-risk students was informal notes taken by project staff during ongoing observations and consultation sessions.

Procedures

Student assessment. The DIBELS assessment was conducted three times during the year, with one exception. The school operates on a year-round calendar with the school year beginning in July for two-thirds of

the students and teachers. The project started in September and project staff were trained in DIBELS in mid-October. The first data point, which would normally be done within the first month of school, was taken in early November. For one third of the students, the first data point was taken in the fourth month of school, and it was missed altogether for another third of students. The second and third data points were taken at the appropriate times and represent the middle and end of the school year, regardless of student schedule. The assessment was conducted by project staff members. Reliability was established with each assessor.

Professional development. All teachers participated in professional development workshops and ongoing consultation. Participation in the Saturday workshops was voluntary and teachers were compensated for out-of-school time. Ongoing professional development was provided on an individual basis during consultation sessions conducted by the project coordinator, university professors, or the resource specialist. The project coordinator also provided extra support to teachers by periodically attending grade-level meetings to answer questions or to address specific topics regarding intervention as these came up. Teacher feedback was received on an ongoing basis as described above.

Professional development activities included the most critical components of early reading development for ELL students and consisted of phonemic awareness, alphabetic principle, oral reading fluency, English language development and assessment. School- and university-based project staff agreed that the professional development content should be research-based and reflect the state-mandated curriculum standards for grades K-2. For phonological awareness, alphabetic principle, reading fluency and English language development, a training module was prepared that included the research base as well as a collection of practical, hands-on strategies that teachers could implement in their classrooms with small groups or individual students. Assessment was covered in each workshop and included knowledge about assessment practices as well as practical application. Teachers examined their students' DIBELS scores during workshops and engaged in collaborative planning for intervention with their grade-level peers and project staff.

General and special education collaboration. Collaboration across the perspectives of general and special education was an important element of Project PLUS. The project coordinator, a seasoned special educator, had the primary responsibility for delivering ongoing coaching and consultation. The school's primary-grade resource specialist who served students with learning disabilities had daily contact with the classroom teachers and also provided consultation

regarding students with disabilities as well as other students having difficulties who might eventually be referred for special education. The resource specialist provided direct services to the students on her caseload in the regular classroom setting and also included students identified as at-risk for reading failure in small group instruction.

RESULTS

Student Outcomes

Because of the school's history of low achievement in reading, we were interested in examining reading outcomes for all students. Table 4 presents the student outcomes for first grade. Overall, first graders made upward growth in each skill area. However, we see a pattern of meeting the established benchmarks later than the expected timeline (Good et al., 2000; Kaminski & Good, 1996). For example, the established benchmark for Letter Naming Fluency is 47 letters per minute by the end of kindergarten. The first graders in our study neared the benchmark by the middle of first grade. Similarly, students should reach the benchmark of 35 phonemes per minute by entrance to first grade for phoneme segmentation, but participating students did not reach that benchmark until mid-first grade. For Nonsense Word Fluency, the benchmark of 40 sounds per minute should be reached by mid-first grade but students reached it by the end of the year. The benchmark for Oral Reading Fluency is 40 words per minute by the end of first grade, a goal students did not meet. Finally, since Word Sentence Fluency does not have an established benchmark, it was used here as an indication of oral language growth. We see students' scores on this subtest increasing with time.

Table 5 shows second-grade outcomes for DIBELS scores. Second graders began the year right at the benchmark of 40 sounds per minute on Nonsense Word Fluency, a point that should be reached by mid-first grade, and they made steady progress. The second-grade benchmark for Oral Reading Fluency is 80 words per minute by the end of the year. We see that the second graders in this study surpassed the first- grade benchmark of 40 at the midpoint of the second-grade year and did not reach the second-grade benchmark at all.

Fluency benchmarks were not reached by either grade-level group, so we examined the extent to which the NWF, a measure of the alphabetic principle, predicted fluency outcomes at each grade level. Figure 1 shows first-grade students' scores for NWF and ORF at mid-year and end, respectively. The trendline indicates that NWF is predictive of ORF. However, we see a group of students ($n = 13$) who reached the benchmark for NWF but not for ORF. Figure 2 shows the second-grade NWF and ORF scores at mid-year and end. Similar to the first-grade out-

comes, there is a predictive relationship between the two measures and a significant number of students (*n* = 65) who have met the NWF benchmark but were still below the ORF second-grade benchmark of 80 words per minute. Sixteen second graders met the NWF benchmark but did not even reach the first-grade ORF benchmark of 40 words per minute. In other words, for both grade levels, we see a sizable group of students who had adequate skills with the alphabetic code and a smaller group who did not develop reading fluency.

Of interest to this study was the extent to which there were students who were at-risk in each skill area.

For each skill area, there is a cutoff point below which students are considered to be highly at-risk. Table 6 shows the percentage of students at each grade level who fell within the risk range on the subtests given at each data point.

We were interested in comparing the performance and progress of the students with LD and the students identified as at-risk with the overall student progress. We charted means for these groups on the reading measures that were given at all three data points. Figure 3 shows the progress of first graders on PSF throughout the year for the three groups. As illustrated,

Table 4
First Grade DIBELS Scores

| Subtest	Time 1		Time 2		Time 3	
	M	*SD*	*M*	*SD*	*M*	*SD*
Letter Naming	35.55	15.96	46.05	15.52	55.21	15.32
Phoneme Segmentation	27.14	20.18	36.41	21.19	46.62	18.93
Nonsense Word	27.27	18.59	32.40	18.92	48.79	24.32
Oral Reading Fluency					29.10	23.19
Word Sentence	18.23	16.58			34.74	14.22

Note. DIBELS = *Dynamic Indicators of Basic Early Literacy Skills* (Kaminski & Good, 1996). Values represent number of correct responses per minute. Oral Reading Fluency was only given at the end of the year. Word Sentence was given at the beginning and end of year. The benchmarks for each subtest are as follows: Letter Naming, 47 letters per minute by end of kindergarten; Phoneme Segmentation, 35-45 phonemes per minute by end of kindergarten; Nonsense Word, 40 sounds per minute by middle of first grade; Oral Reading Fluency, 40 words per minute by end of first grade; Word Sentence has no established benchmark.

Table 5
Second Grade DIBELS Scores

Subtest	Time 1		Time 2		Time 3	
	M	*SD*	*M*	*SD*	*M*	*SD*
Nonsense Word	41.94	27.03	57.14	37.12	68.42	40.37
Oral Reading Fluency	31.63	31.23	44.35	34.76	55.98	34.70
Word Sentence	29.75	15.46			47.57	14.97

Note. DIBELS = *Dynamic Indicators of Basic Early Literacy Skills* (Kaminski & Good, 1996). Values represent number of correct responses per minute. Word Sentence was given at the beginning and end of year. The benchmarks for each subtest are as follows: Nonsense Word, 40 sounds per minute by middle of first grade. Oral Reading Fluency, 80 words per minute by end of second grade; Word Sentence has no established benchmark.

Figure 1. First-grade nonsense word and oral reading fluency outcomes at mid-year and end of year.
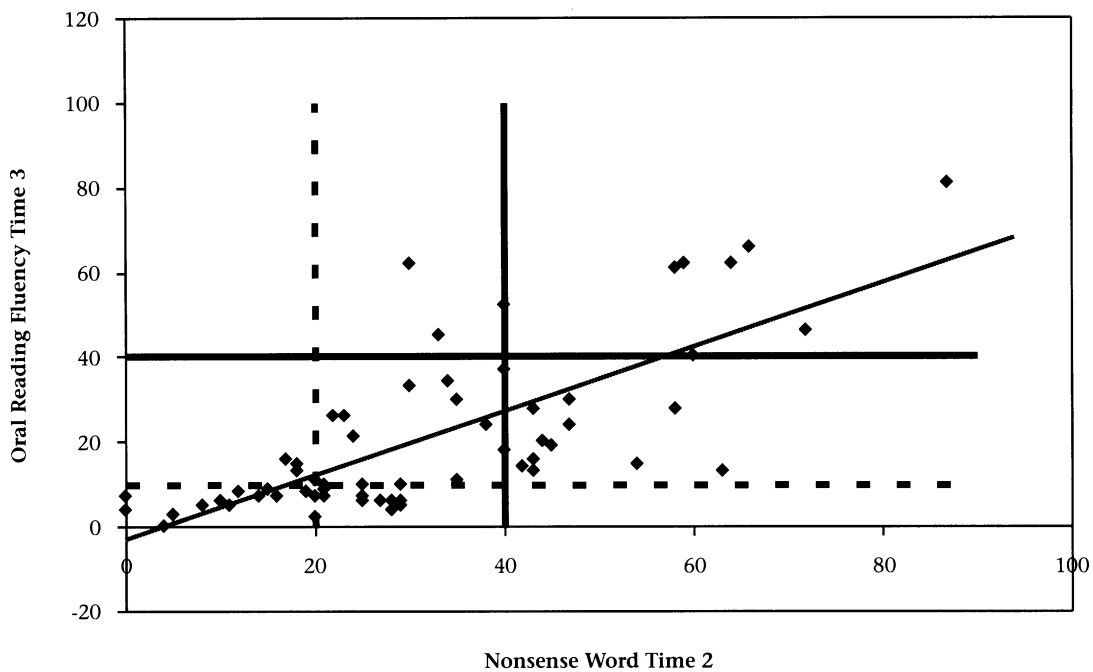
Note. The solid lines represent the benchmark for each measure, or the level at which students at this point in time should have progressed through the curriculum successfully. The dashed lines represent the level at which a student would be considered to be highly at-risk in each skill area.

the students with LD performed better than the at-risk students at all three data points, approaching the no-risk students by the end of the year. Figure 4 shows the performance of these three groups on NWF. Here we see that the at-risk and LD students were similar in performance and had a similar rate of progress.

Second-grade students with LD, at-risk students, and no-risk students are depicted in Figure 5 for NWF and Figure 6 for ORF. For NWF, we see the students with LD performed better than the at-risk students at each data point, but both groups reached the first-grade benchmark of 40 sounds per minute by the end of the year. However, for reading fluency, depicted in Figure 6, the students with LD and the at-risk students did not reach even a first-grade benchmark of 40 words per minute by the end of the year. The LD students and at-risk students performed similarly throughout the year while the mean of the typically performing group reached the 80 words per minute benchmark by the end of second grade.

Teacher Outcomes

At this phase of the project, we were primarily interested in discerning teachers' perceptions of intervention and the extent to which they utilized information from the professional development workshops. We reviewed all teacher data sources for major themes and extracted descriptive anecdotal evidence for each. Two significant themes were evident.

First, the use of DIBELS was itself a powerful teacher intervention. Numerous comments from teachers involved their use of the assessment data and its impact on their teaching. Teachers reported in various sources and on an ongoing basis that the DIBELS provided an expanded awareness of their students' performance, as evident in this comment: "This is the first time that assessment data are meaningful." The second significant theme was simply that the teachers thought about their at-risk students and how to meet their needs. Teachers reported shifting from a whole-class focus in planning and instruction to at least considering, and in many cases acting upon, the needs of individual students.

There was an increased sense of responsibility for teaching at-risk students. "I set up a workshop time and worked with two small groups on intervention activities," represents a teacher response in this category.

Information from the teacher data sources was reviewed for documentation of reported use of intervention strategies. Many teachers reported a change in grouping procedures (e.g., "reforming groups to better meet student needs," and "implementing a 'workshop' time to allow me to work with small groups"). A simple tally revealed that teachers reported a high incidence of reteaching a lesson as an intervention strategy ($n = 37$) and making more time for one-to-one instruction ($n = 24$). Next highest in frequency of evidence was holding a parent conference ($n = 16$), followed by using flashcards to teach high-frequency words ($n = 11$). All other strategies or intervention techniques received a frequency rating of 7 or less. They included a range of strategies such as preteaching a lesson to individual students, repeated reading to develop fluency, playing games with letters, and implementing daily writing time.

Teachers responded fairly positively to the professional development. Specifically, the workshop evaluations revealed that topics of immediate relevance and importance to their teaching were rated the highest.

Table 6

Percentage of Students At-Risk by Skill Area

	PSF < 10	NWF < 20	ORF*
First Grade			
Beginning of Year	28	41	
Middle of Year	15	23	
End of Year	6	6	21
Second Grade			
Beginning of Year		18	33
Middle of Year		9	33
End of Year		5	36

*Note: The risk level for ORF rose as the expectation for level of fluency increased throughout the grade level. At the end of first grade, scores less than 10 words per minute were considered risk level. At the beginning, middle and end of the year in second grade, the risk levels were scores below 10, 20, and 40 words per minute, respectively.

Moreover, about half of the teachers had positive perceptions of the ongoing consultation regarding their at-risk students and the in-class coaching. However, they felt it was not sufficient and reported that they did not get enough time with a coach.

DISCUSSION

The purpose of this study was to document the implementation of early reading intervention for ELL students in an urban school and to examine the student outcomes following a year of implementation. Since few previous studies have documented early reading intervention for ELL students learning to read in English, a situation common in some urban centers, it is important to describe the initial phase of implementation and to identify initial challenges. The primary purpose of the professional development for the first- and second-grade teachers was to assist them in identifying students whose skills were insufficient for grade-level success and to implement instruction that would target specific areas of need. The long-term goal of the project is to establish classroom practices to prevent unnecessary referral for special education.

Student Outcomes

In the current climate of increased accountability, student outcomes are of primary interest. To facilitate the translation of research to practice, teacher change efforts must have a direct impact on student outcomes (Gersten et al., 1997; Malouf & Schiller, 1995). Although our primary focus was the students deemed to be at-risk for reading failure and the students with LD, we felt compelled to first describe the student outcomes in general to provide adequate background for interpreting the progress of the target groups. Exactly what to expect of ELL students in urban, high-poverty schools, particularly in the absence of a bilingual approach to literacy instruction, is a topic of considerable debate. Few studies have documented the progression of early reading skills of ELL students in an English-speaking and reading environment (August & Hakuta, 1998).

Generally, we saw upward growth on all measures. However, a significant proportion of students fell within the risk range, particularly in reading fluency. This study demonstrates a range of student performance with a significant portion performing below established expectations rather than pervasive poor outcomes as is often reported in urban schools. The large number of students at-risk at each data point and on each measure highlights the importance of early reading intervention. Our evidence indicates that systematic intervention should not be peripheral in urban schools serving ELL students but should be a top priority and a central focus of all teachers and support staff.
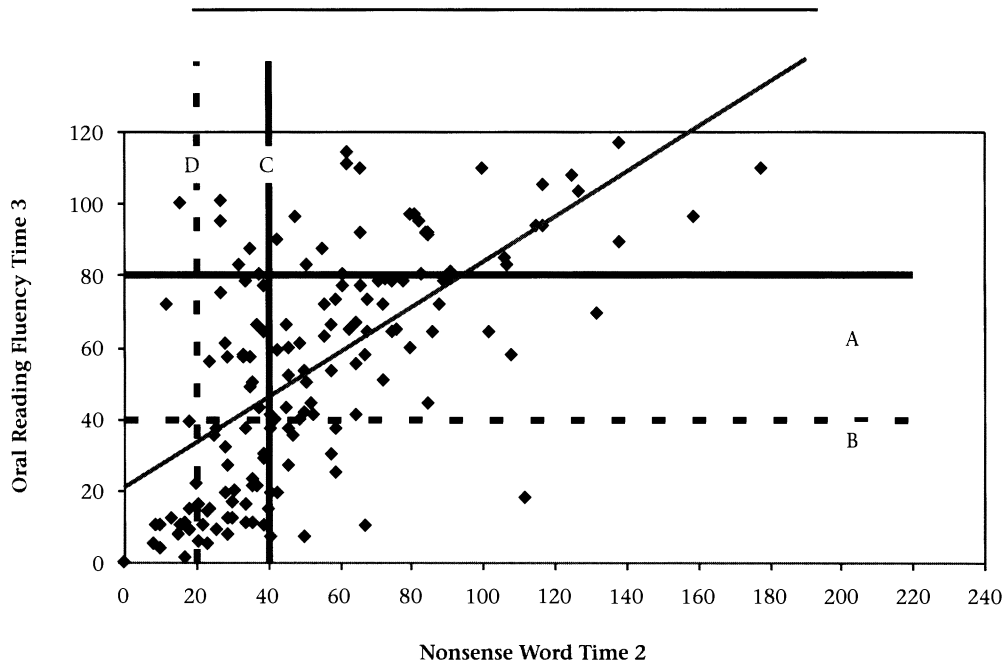
Figure 2. Second-grade nonsense word and oral reading fluency outcomes at mid-year and end of year.

Nonsense Word Time 2

Note. The solid lines represent the benchmark for each measure, or the level at which students at this point in time should have progressed through the curriculum successfully. The dashed lines represent the level at which a student would be considered to be highly at-risk in each skill area.

Figure 3. Comparison of first-grade students with LD, at-risk students, and students not in the risk range on phoneme segmentation fluency.

Time

LD   No Risk   At-Risk

Figure 4. Comparison of first-grade students with LD, at-risk students, and students not in the risk range on nonsense word fluency.
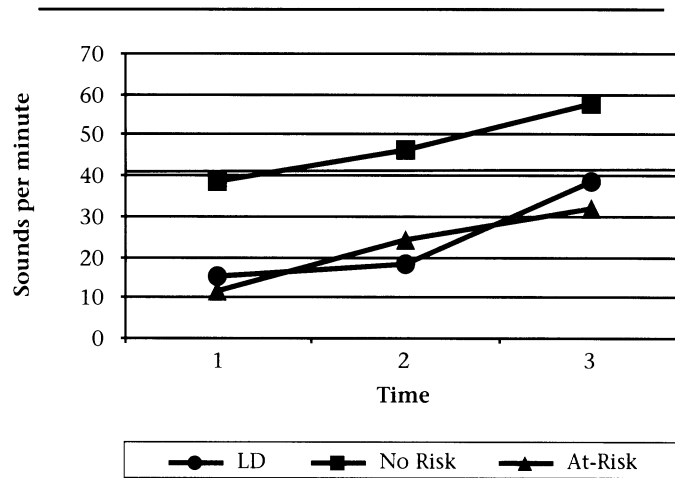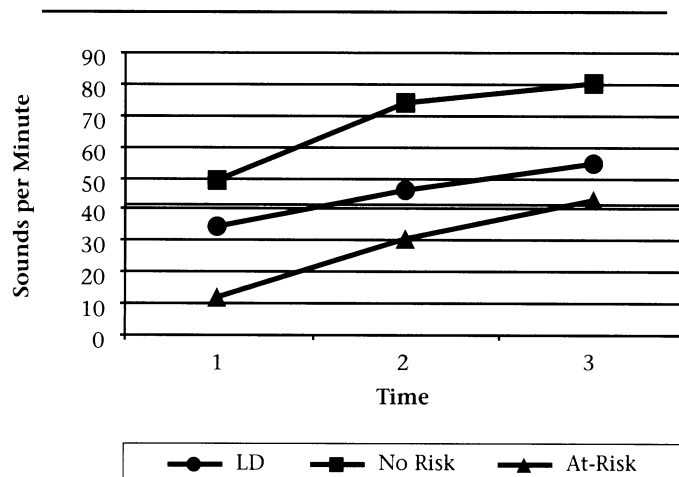

Figure 5. Comparison of second-grade students with LD, at-risk students, and students not in the risk range on nonsense word fluency.

Ongoing assessment that feeds back to the teachers and school administrators may help to keep the focus on ensuring learning for all students. In this project, teachers were well aware of the skill development of their at-risk students and were at least aware of how to address their needs. This is critical to engaging teachers in ongoing efforts to raise the performance level of at-risk students.

An issue that needs further exploration is our expectations for reading fluency for ELL students. In this study, we see a difference in the pattern of outcomes of ELL

students for oral reading fluency compared with their outcomes for phoneme segmentation and nonsense word fluency. A large group of students fell below the benchmark line for oral reading fluency in first and second grade. Based on this finding, we hypothesize that there may be a "fluency wall" for ELL students that is difficult to cross in the early grades. Students new to the English language may be able to assimilate the phonological aspects of the code, but without fluent English language knowledge it may be difficult to acquire reading fluency. In other words, we suspect that these students did not have a strong base of English on which to map the code. The ELL students' difficulty with oral reading fluency highlights the importance of integrating English language development into all aspects of literacy instruction.

The students with LD in this study received all their special education services in an inclusion model with the resource specialist and a skilled paraprofessional going into their regular classroom for about an hour each day. The students with LD received a full lesson reading/language arts instruction each day from their regular education teacher along with their classroom peers. Their special education services were supplemental to the whole-class instruction and, in all cases, were focused on the foundational skills of reading that were also emphasized by the teachers during intervention. In fact, the LD students were included in intervention groups with the at-risk students and often received sup-

plemental instruction from their special education teacher, the paraprofessional, and the classroom teacher with as many as three to four focused lessons per day. It is not surprising that these students appeared to be performing similarly to or better than the at-risk students. Given that the students with LD were identified in the early grades and that they showed positive growth on these essential literacy skills, we believe their prognosis for reading is positive. It is too soon to tell if they will "catch up" with their same-age peers, but they are within reach of developing the foundational skills of reading.

Teacher Change

Recognizing that significant change in schools takes time (Dickson & Bursuck, 1999; Goldenberg & Gallimore, 1991), we expected during this first year that teachers would implement practices learned in professional development to varying degrees. Teacher reports confirmed widespread changes in how they *thought* about their at-risk students, and we were encouraged that teachers moved from focusing solely on whole-class instruction to considering the needs of individual student. The fact that they did think about the needs of students identified as at-risk is perhaps representative of the initial phase of change. Richardson (1991) suggests that changing teachers' perceptions may be the first step to ongoing improvement

Figure 6. Comparison of second-grade students with LD, at-risk students, and students not in the risk range on oral reading fluency.
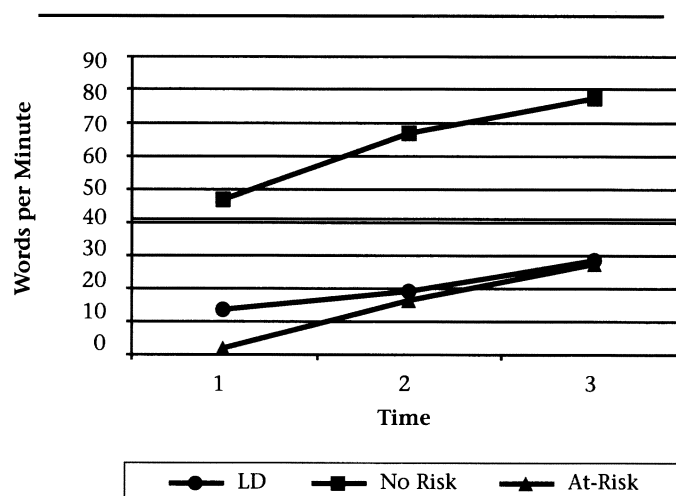
in practices. The use of curriculum-based assessment may have been a catalyst for this change. Teachers reported that the use of ongoing assessment to guide their instruction had a significant impact. We intended for the assessment to be a tool for teachers but it became more than that and seemed to be a significant source of professional growth for the teachers. The impact of curriculum-based measurement on teachers is well documented (e.g., Deno, 1997; Foegen, Espin, Allinder, & Markell, 2001; Stecker & Fuchs, 2000). We are hopeful that continued support and experience with assessment and intervention practices will lead to more consistent implementation in subsequent years.

We were surprised at how much success the teachers reported with intervention in the end-of-year focus groups because the ongoing documentation in teacher logs did not depict widespread implementation of activities promoted in the professional development. Hargreaves and Fullan (2000) suggest that sustained school reform may be enhanced by simultaneous change movements. Indeed, the teachers in this school were caught up in several change movements that were occurring simultaneously with the intervention project. Specifically, the adoption of new reading and math programs was the manifestation of various local and state initiatives and may have provided a backdrop for the positive teacher comments. Due to increasing pressure from state and district mandates to improve reading instruction, the teachers were in their first year of implementing a reading program that was dramatically different from their previous bilingual, constructivist, whole-language approach. The program, implemented almost entirely in English with strategic primary language support for vocabulary development, emphasized systematic and explicit phonics and spelling instruction and the use of decodable text. The professional development focusing on at-risk students and intervention "piggy-backed" onto the extensive training teachers received for the new reading program. We determined that the fairly inexperienced teachers in our sample found the reading program to be a concrete structure to guide their instruction while the veteran teachers honed their already competent teaching skills.

Consistent with previous findings, teachers found the professional development to be most helpful when it provided hands-on practice opportunities with teaching techniques readily applicable to their classroom or in-class demonstrations with their own or a colleague's students. Workshops allowed time for teachers to "make and take" materials that they could use in their intervention groups and offered opportunities to practice the games and activities with each other. In a previous study,

Research teams did not teach students but they invested considerable amounts of time in supporting teachers in numerous ways, including providing materials and lesson plans and giving and interpreting assessments. For the initiation of reform in schools that are challenged by community poverty, facilitators in such first-generation projects may be critical for initiating reform. (Hiebert & Taylor, 2000, p. 478)

Baker and Smith (1999) reported that much of what teachers learn comes from direct classroom experience. Personalized coaching to improve teaching practices is time-tested (e.g., Gersten et al., 1995; Showers, 1985) and was viewed positively by participating teachers. Furthermore, teachers responded most enthusiastically to topics that were most relevant or significant in their daily teaching lives, or, as Richardson (1991) describes, "situated" in the realities of their classrooms.

The most significant challenge was providing enough reality-based, classroom-based support. Of the 27 teachers in K-2, over half were inexperienced and on emergency credentials. With only three project personnel to provide ongoing support, only one of whom devoted full time to the project, it was difficult to provide the teachers the extensive reality-based support that they reported to be most helpful. Thus, we had to make difficult decisions along the way about allocating support to the classrooms where the need was greatest, knowing that most classrooms would benefit from extensive support if we could only provide it. We believe this raises the question of how quickly and extensively it is possible to effect significant change in urban school reform efforts. How much is enough? Our initial experiences in this project have led us to believe that it is necessary to saturate a school with support to make an initial impact, requiring ample personnel and financial resources.

Conclusions

The site for this project was carefully selected to be typical of low-performing, urban schools serving an ELL population in high-poverty communities. However, we realize the limitations of lacking a comparison school and the bias inherent in using an intact group of teachers. Our primary purpose was to provide sufficient professional development and support to have a significant impact on student and teacher outcomes. Therefore, perhaps the benefit of being able to examine the factors associated with this purpose in depth at one site outweighed the limitations.

Over half of the participating teachers were teaching without full certification. Several teachers had logged a few years of experience while working slowly

toward earning a credential. Without project support, these teachers would typically have little ongoing contact with master teachers and would receive little supervision beyond periodic mandatory evaluations. Teachers reported that the hands-on, practical, classroom-based nature of the professional development was particularly important. The teachers received demonstration lessons, observation and consultation, and opportunities to meet and discuss instructional issues with a highly skilled and experienced teacher who was employed by the grant full time to serve in this capacity. Establishing a collaborative, collegial atmosphere for interaction between project and school personnel was critical to teacher acceptance of the project. Because the emergency credential dilemma is not unique to this city or district, and there is a national shortage of qualified teachers, we believe there is much to be gained by investing in master teachers to serve as coaches and models for beginning teachers.

Changing student outcomes in an environment where low academic performance and other social challenges are pervasive is a tall order. We realized at the outset that significant change would take time and that it would be necessary to work within the culture of the school and district to have an impact. It was necessary for the project to have a strong presence at the school site and to maintain ongoing contact with teachers to help them develop a sense of ownership for the program and its outcomes. We have not fully accomplished this but are optimistic that continued collaborative support is rooted in the teachers' classroom experiences will be integral to continued progress.

Following one year of implementation of professional development, ongoing student assessment, and classroom-based support, we are left with critical questions to guide further implementation. First, with regard to teachers, we hope to continue to address the questions of how much support is necessary and how long it takes to improve instruction and transform chronic low achievement. Second, with regard to students, we must continue to address issues related to the role and nature of English language development and literacy instruction for ELL students learning in the absence of a bilingual model. We need continued and systematic research to further develop effective literacy instruction for ELL students in urban centers. Lastly, we were struck by the similar performance of the LD and at-risk students and believe it is important to continue to explore inclusive educational opportunities that provide early detection of reading problems and intervention for *all* students demonstrating need.

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