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THE EFFECTS OF RESPONSE TO INTERVENTION ON LITERACY DEVELOPMENT IN MULTIPLE- LANGUAGE SETTINGS

Angela Stephens McIntosh, Anne Graves, and Russell Gersten

Abstract. This descriptive study documents the effects of response-to-intervention type practices in four first-grade classrooms of English learners (ELs) from 11 native languages in three schools in a large urban school district in southern California. Observations and interviews in four classrooms across two consecutive years were compared to first-grade gains in oral reading fluency ($N = 111$). Reading fluency data were examined in relation to ratings of literacy practices, including the degree to which Tier 1 alone or Tier 1 plus Tier 2-type instruction was implemented. The correlation between classroom ratings on the English Learners Classroom Observation Instrument (ELCOI) and gain from pre- to posttest in first grade on oral reading fluency was moderately strong in both Year 1 ($r = .61$) and Year 2 ($r = .57$). The correlation between Cluster II teacher ratings and ORF gains was strong in both Year 1 ($r = .75$) and Year 2 ($r = .70$), suggesting a strong relationship between Tier 2-type literacy practices and end-of-first-grade oral reading fluency. Results indicated a strong correlation ($r = -.81$) between the number of students below DIBELS benchmark thresholds at the end of first grade and the teacher rating on the amount of instruction provided for low performers. Followup data at the end of third grade in oral reading fluency and comprehension indicate moderate correlations to first-grade scores ($N = 51$). Patterns of practice among first-grade teachers and patterns among ELs who were ultimately labeled as having learning disabilities are discussed. Educational implications and recommendations for future research are also presented.

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Much has been written about the compounded risks for students who come to school speaking a language other than English (August & Siegel, 2006; National Center for Educational Statistics, 2006). Response to

intervention (RTI) may hold promise for all children who are struggling to learn to read (Vaughn & Fuchs, 2003), including English learners (ELs). If done well, RTI provides a series of supports and instructional safety



nets to assist students in the learning process. Potentially, RTI is a better system than waiting for students to fail (Foorman & Torgesen, 2001; National Institute of Child Health and Human Development, 2003).

A growing body of research (Chiappe, Siegel, & Wade-Wooley, 2002; Droop & Verhoeven, 2003; Echevarria & Graves, 2007; Fletcher, Coulter, Reschly, & Vaughn, 2004; Gersten, Baker, Haager, & Graves, 2005; Graves, Gersten, & Haager, 2004; Graves, Placentia-Peinado, Deno, & Johnson, 2005; Gunn, Biglan, Smolkowski, & Ary, 2000; Haager & Windmueller, 2002; Jiménez & Gersten, 1999; Lesaux & Siegel, 2003; Linan-Thompson, Vaughn, Hickman-Davis, & Kouzekanani, 2003) has demonstrated that many of the strategies and approaches that research deems effective for native speakers of a language are effective for ELs as well. In fact, Chiappe et al. (2002) found that, in terms of phonemic awareness and word reading, ELs can learn to read as quickly as native English speakers. More recently, research on comprehension and vocabulary instruction is revealing the complexities that teachers of English learners must add to basic effective practices (August & Shanahan, 2006; Francis, Rivera, Lesaux, Kieffer, & Rivera, 2006).

In Southern California, the rise in both the number of ELs entering school and the number identified with learning disabilities is often noted (August & Siegel, 2006; Kindler, 2002). In the large urban school district in which this study was conducted, approximately 52 languages are spoken. In this investigation, the student population is referred to as a multiple-language group in that 11 native languages are represented as well as a wide variety of cultural groups. The focus is on four first-grade classrooms across two years.

The data for this investigation were drawn from a large study of several urban school districts in southern California conducted in the context of California Schools Literacy Reform by Russell Gersten and his research team (Instructional Research Group; inresg.org). Various aspects of the larger research project that combined data from several school districts in southern California are reported in Haager, Gersten, Baker, and Graves (2003), Gersten and Baker (2003), Graves et al. (2004), and Gersten et al. (2005). The team of researchers on the larger project developed an observational measure, the English Learners Classroom Observation Instrument (ELCOI). Details on the development of the measure are reported in Haager et al. (2003) and Gersten et al. (2005). In the Methods section of this article we provide a brief overview of psychometric characteristics of the measure.

RTI had not been coined as a term at the time of the larger study from which these data were drawn. Because

the ELCOI was developed based on evidence-based practices, using this measure participating teachers were rated based on the principles on which RTI was developed (Vaughn & Fuchs, 2003). This descriptive investigation was designed to retroactively examine the teaching practices of first-grade teachers of English learners in multiple-language classrooms to determine if their practices can be described in the context of Tier 1 and Tier 2 instruction according to the RTI model that has been recently recommended for practice. For the purposes of this study, Tier 1 is evidence-based reading instruction by teachers. Tier 2 is small-group instruction for students who were not responding well enough to Tier 1 instruction. Finally, Tier 3 is referral to special education for students who did not respond well enough when given Tier 1 and Tier 2.

The ELCOI rating system was developed using “effective practices” research (see Gersten et al., 2005, for a full review). As a result, the ELCOI includes a section (see Figure 1, Cluster II) entitled *Instruction Geared Toward Low Performing Students*. In this article, Tier 2 instruction is defined as differentiated small-group instruction for low-performing students that is sustained and significantly different from instruction that students who are not at risk are receiving and is associated with the Cluster II factors on the ELCOI.

In this descriptive study, we describe the instructional practices of four teachers of English learners (ELs) in multiple-language settings across two years of first-grade teaching and compare the effectiveness of the instructional practices of the four teachers to student reading outcomes in first grade and during a third-grade followup assessment.

Observational data on teacher practice were analyzed to determine whether teachers used Tier 1 instruction alone or also provided Tier 2 instruction for ELs experiencing difficulties. We also present data on the proportion of students in each class who fell below established benchmark thresholds in reading. Finally, we report on students who were labeled with learning disabilities by grade three (i.e., received Tier 3 services). We attempt to link the differences in referral rates to the nature of the literacy instruction provided during first grade, the critical first year of formal reading instruction.

This is an exploratory study in that the sample size is small and the research design is descriptive. Our goal is to use these data to generate hypotheses that can be tested in subsequent research.

METHOD

Participants

Teachers. The sample consisted of the four teachers who participated in the observational study for two years (see Table 1). The schools were similar in demo-

Figure 1. Items on the ELCOI.

SIX CLUSTERS OF ITEMS:

Explicit Teaching (Cluster I)

- 1) Models skills and strategies
- 2) Makes relationships overt
- 3) Emphasizes distinctive features of new concepts
- 4) Provides prompts
- 5) Length of literacy activities is appropriate
- 6) Adjusts own use of English during lesson

Instruction Geared Toward Low Performing Students (Cluster II)

- 7) Achieves high level of response accuracy
- 8) Ensures quality of independent practice
- 9) Engages in ongoing monitoring of student understanding and performance
- 10) Elicits responses from all students
- 11) Modifies instruction for students as needed
- 12) Provides extra instruction, practice and review
- 13) Asks questions to ensure comprehension

Sheltered English Techniques (Cluster III)

- 14) Uses visuals or manipulatives to teach content
- 15) Provides explicit instruction in English
- 16) Encourages students to give elaborate responses
- 17) Uses gestures and facial expressions in teaching vocabulary and clarifying meaning of content

Interactive Teaching (Cluster IV)

- 18) Secures and maintains student attention during lesson
- 19) Extent to which students are "on task" during literacy activities
- 20) Selects and incorporates students' responses, ideas, examples and experiences into lesson
- 21) Gives students wait time to respond to questions

Vocabulary Development (Cluster V)

- 22) Teaches difficult vocabulary prior to and during lesson
- 23) Structures opportunities to speak English
- 24) Provides systematic instruction to vocabulary development
- 25) Engages students in meaningful interactions about text

Phonemic Awareness and Decoding (Cluster VI)

- 26) Provides systematic instruction in phonemic awareness
- 27) Provides systematic instruction in letter-sound correspondence
- 28) Provides systematic instruction in decoding

Other Items that were moderately correlated with reading measures but did not load in a cluster on the factor analysis:

- 29) Provides feedback on academic performance
- 30) Transitions between instructional activities are short and efficient

graphics. The first-grade classrooms at each of the schools consisted of predominantly ELs, and the schools all serve the poorest and lowest performing students in the large southern California school district.

Although teachers in the participating district were required to adhere to state standards in terms of research-based teaching practices, they were not required to use any one particular basal or core reading series. All four teachers were fully licensed in California to teach students in first grade; their teaching experience ranged from 2 to 26 years (see Table 1). Though the

two teachers who had taught the longest had the highest ratings on their literacy practices, the teacher with the lowest scores had taught for nine years and the one teacher who had a marked improvement from Year 1 to Year 2 had taught the fewest number of years. Thus, while number of years taught is a part of the description of these classrooms, the effects of this variable are difficult to interpret.

Teachers in each of the classrooms taught almost exclusively in English, since it provided common ground for all of the students from up to 11 different

Table 1
Information about Multiple Language Classrooms (Years 1 and 2)

Teachers	Schools (All 100% free or reduced-cost lunch)	Number of Years Taught: Year 1 & Year 2	Teacher Speaks Language Other Than English	Language Spoken by Students in Year 1	% of Class ELs in Year 1	Language Spoken by Students in Year 2	% of Class ELs in Year 2
Micah	A	21, 22	No	Hmong Lao Spanish Vietnamese	80%	Hmong Lao Spanish Tagalog Vietnamese	90%
Andrea	A	25, 26	No	Cambodian Hmong Spanish Vietnamese	90%	Hmong Lao Spanish Tagalog Vietnamese	80%
Gary	B	2, 3	No	Cambodian Somalian Spanish Vietnamese	100%	Cambodian Cantonese dialect Somalian Spanish Vietnamese	100%
Luis	C	8, 9	Spanish	Spanish dialects and three Native American languages	100%	Spanish dialects and two Native American languages	100%

language backgrounds. One teacher, Luis, occasionally gave directions or explained a procedure in Spanish because he had predominantly Spanish-speaking students. We observed this rarely, however.

Students. The first-grade classrooms at each of the schools consisted of predominantly ELs, who came from families where one of following languages was spoken at home: Cambodian, Hmong, Lao, Russian, Somali, Spanish, Sudanese, Tagalog, or Vietnamese. In one classroom, although all students were classified as coming from Spanish-speaking homes, the home language was sometimes an indigenous language of Native American origin spoken in some Southern regions of Mexico or Latin America.

The students were tested on the IDEA Oral Language Proficiency Test in English (Ballard, Dalton, & Tighe, 1995) in kindergarten to determine their level of language proficiency. Students were designated non-English speakers, limited English speakers, or emergent English speakers. As an indicator of the students' socio-economic status, we found that all of them received free or reduced-cost lunch at their respective schools.

In order to be included in the data analyses, each student had to be present for both pre- and posttesting at the beginning and the end of first grade (see Tables 2 and 3). Sample sizes from the four classrooms were 51 for Year 1 and 60 for Year 2 ($N = 111$). By the end of third grade, there were considerably fewer students left in the sample ($N = 59$).

Measures

English Language Learners Classroom Observation Instrument (ELCOI). The ELCOI is a 30-item moderate-inference Likert scale (see Figure 1). The Cluster II empirically derived subscales are remarkably similar to the defining features of the Tier 2 instruction as follows: (a) achieves high level of response accuracy; (b) ensures quality of independent practice; (c) engages in ongoing monitoring of student understanding and performance; (d) elicits responses from all students, (e) modifies instruction for students as needed; (f) provides extra instruction, practice, and review; and (g) asks questions to ensure comprehension.

Reliability. The internal consistency reliability for each subscale ranges from .80 to .95, with a median subscale alpha of .89 (Gersten et al., 2005). The median interobserver agreement on an item-by-item basis is 74%. This is a conservative estimate of instrument reliability as it is based on item-by-item agreement.

Validity. Criterion-related validity was established by correlating scores from each subscale with residualized growth scores in actual reading performance in 20 classrooms. (Six of the 20 in the reliability/validity study were classrooms involved in the current study.) The

dependent measure for this analysis was a composite of posttest reading comprehension and oral reading fluency adjusted for pretest scores in letter naming fluency (Gersten et al., 2006). Criterion-related validity coefficients between classroom ratings and residualized growth scores for each of the six subscales on the ELCOI were consistently in the high moderate range: median coefficient was .60, with a range from .49 to .65. These findings were replicated in a study by Gersten et al. (2005). Thus, there is evidence of good internal consistency reliability, reasonable interrater reliability (for a rating scale requiring a good degree of inference), and good criterion-related validity.

Observational procedures. The four participating classrooms were observed during a 2.5 hour reading/language arts instructional session between five and seven times each year. Based on extensive observational notes, each observer completed a rating form with the items on the ELCOI (see Figure 1) listed to the left of a 1- to 4-point Likert scale in which 4 = very effective, 3 = partially effective, 2 = moderately effective, and 1 = not effective. If a practice was not observed over the five to seven mornings, the observer filled out "not observed." Field notes included specific examples of each teacher's practices. These notes not only guided the determination of the score on the rating scale, but also provided a source for more open-ended qualitative analysis of the observational data.

After observations were completed and reading assessments conducted, each teacher was interviewed. Questions generated by the field notes were posed by one of the researchers, and the teachers had an opportunity to ask questions about the research. In all cases, the interviews lasted approximately 30 minutes.

For this analysis, the subscale score ratings on the ELCOI for four teachers across two years are reported. A score was calculated for the entire ELCOI measure and for subscales, and those scores were correlated with student outcomes in the four classrooms for two years in a row. The mean rating for each teacher was determined by totaling the scores of each individual item score added together and divided by the total number of rated items.

For this study, Tier 1 instructional practices were defined as instruction that took place in whole groups with only occasional individualization or small-group instruction. Tier 1 was consistent with district standards and recommended instructional practices, but did not provide intensive, explicit instruction to low performers in the classroom setting. Tier 2 was the additional intensive, systematic small-group instruction conducted by the teacher or by other staff for students who were not performing at expected levels compared to others in the class.

Table 2
Year 1 Data: Observation Scale Ratings and Number of Students at Risk at the End of the Year

Teachers and Sample Size (Number of students who took both pre- and posttests)	Mean Teacher Rating on ELCOI	Teacher Rating on Teaching Low Performers	Tier 1 or Tier 1 plus Year 2	Students Reading 20 WPM or Fewer on ORF at End of the Year	Students Reading 21 to 39 WPM on ORF at End of the Year	% of Students Reading Below 40 WPM at End of the Year	ORF Pretest Mean First Grade (SD)	ORF Posttest Mean End of First Grade (SD)	ORF End of Third Grade	Passage Comp End of Third Grade
Micah (N = 15)	3.75	4	Tier 1 & 2	2	1	20%	27.19 (15.76) (N = 15)	62.00 (32.37) (N = 15)	121.24 (29.45) (N = 9)	82 (22.89) (N = 9)
Andrea (N = 10)	3.5	4	Tier 1 & 2	0	4	40%	26.40 (17.77) (N = 10)	58.50 (26.61) (N = 10)	132.82 (31.23) (N = 6)	85 (25.21) (N = 6)
Gary (N = 15)	2.0	1	Tier 1 only	9	2	73%	12.71 (8.53) (N = 15)	36.86 (19.96) (N = 15)	98.57 (26.33) (N = 9)	69 (27.37) (N = 9)
Luis (N = 11)	2.0	1	Tier 1 only	8	1	81%	24.07 (26.73) (N = 11)	50.60 (32.15) (N = 11)	89.22 (35.48) (N = 6)	71 (30.46) (N = 6)

Table 3
Year 2 Data: Observation Scale Ratings and Number of Students at Risk at the End of the Year

Teachers and Sample Size (Number of students who took both pre- and posttests)	Mean Teacher Rating on ELCOI	Teacher Rating on Teaching Low Performers	Tier 1 or Tier 1 plus Year 2	Students Reading 20 WPM or Fewer on ORF at End of the Year	Students Reading 21 to 39 WPM on ORF at End of the Year	% of Students Reading Below 40 WPM at End of the Year	ORF Pretest Mean First Grade (SD)	ORF Posttest Mean End of First Grade (SD)	ORF End of Third Grade (SD)	Passage Comp End of Third Grade
Micah (N = 17)	3.75	4	Tier 1 & 2	0	2	11%	28.06 (30.18) (SD = 17)	77.06 (35.89) (SD = 17)	134 (27.49) (SD = 8)	85 (24.82) (SD = 8)
Andrea (SD = 11)	3.75	4	Tier 1 & 2	0	0	0	22.67 (19.00) (SD = 11)	81.92 (25.30) (SD = 11)	139 (29.15) (SD = 6)	88 (25.21) (SD = 6)
Gary (SD = 16)	3.0	3	Tier 1 only	2	0	13%	10.16 (6.84) (SD = 16)	59.66 (22.35) (SD = 16)	121 (26.33) (SD = 9)	81 (27.37) (SD = 9)
Luis	2.5	1	Tier 1 only	2	4	40%	16.87 (9.89) (SD = 15)	53.4 (27.99) (SD = 15)	104 (35.48) (SD = 6)	70 (30.46) (SD = 6)

Teaching practices that were rated as “very effective” in the area of “gears instruction toward low performing students” (see Cluster II in Figure 1) have been redefined in the context of RTI as effective Year 2 practices. Field notes indicate that teachers who scored very high on this subscale were teaching low-performing students in small groups, which can be viewed as implementation of both Tier 1 and Year 2 practices as defined in RTI.

Reading Measure (Oral Reading Fluency)

We used a measure of oral reading fluency that accompanies the Dynamic Indicators of Basic Early Literacy Skills (DIBELS; Good & Kaminski, 2002) as a primary tool for assessing reading because the ability to recognize isolated words quickly and accurately has been shown to be necessary for comprehension of connected text (Wolf, Bowers, & Biddle, 2000). Very little research is available on the development of reading fluency in ELs, but Gersten and Baker (2003) reported a moderately strong correlation between ORF and comprehension ($r = .6$) in a study of 229 ELs. We also used the research of Good and Kaminski (2002), who have developed DIBELS Oral Reading Fluency (ORF) benchmark thresholds for end-of-first-grade reading as follows: students reading below 40 words per minute (WPM) are at some risk for reading failure, and students reading 20 WPM or fewer are very likely “at risk.”

The passages used in the DIBELS ORF subtest are standardized by grade level and are part of the standard timed readings for first grade originally developed by Deno and colleagues at the University of Minnesota (Good & Kaminski, 2002). Although not part of the DIBELS procedure advocated by Good and Kaminski (2002), we pretested the first graders on oral reading fluency. This allowed a calculation of gain scores. We did this, in part, because the district advocated reading and reading-related instruction in kindergarten. Thus, kindergarten instruction in reading has intensified in recent years, yielding a small group of students who can read to some extent at the beginning of first grade.

Reading Comprehension Measure

At the end of third grade, the Passage Comprehension subtest of the Woodcock Reading Mastery Test-Revised (WRMT-R; Woodcock, 1987) was given as a measure of reading comprehension. The Passage Comprehension (PC) subtest requires the student to use the cloze technique to supply a word that makes sense in the text (reliability reported for PC subtest = .92). The test generally takes students in the third grade between 20 and 30 minutes to complete and, like other subtests in the WRMT-R, it requires six consecutive errors to establish a stopping point. The raw scores were converted to standard scores for each student.

Procedures for Reading Assessment of Students

A team of graduate students who were not involved in the classroom observations conducted the ORF assessments. Subjects read passages at the beginning and then again at the end of the year to determine the number of words read in one minute. In Year 1, pretests were conducted in November and posttests in June. In Year 2, pretests were conducted in September and posttests in June. At the end of third grade, three 1-minute timings were given, and words read correctly per minute were recorded. After the three timings, the WRMT-R Passage Comprehension subtest was administered individually to students.

RESULTS

Relationship Between the Quality of Literacy Practices in First-Grade Classrooms and Growth in ORF of ELs

The range of scores on the ELCOI teacher rating measure was vast, from 2.0 to 3.75, where 2 is considered “somewhat effective” and 4 “very effective” (see Tables 2 and 3). The correlation between classroom ratings and gain from pre- to posttest in first grade on ORF was moderately strong for both Year 1 ($r = .61$) and Year 2 ($r = .57$).

This suggests that the ratings are a relatively valid gauge of the effectiveness of literacy practice in these first-grade classrooms. However, an even stronger relationship appears to exist between teacher ratings on the ELCOI section *Instruction Geared Toward Low Performing Students* (Cluster II) ratings and gain from pre- to posttest. For example, Micah and Andrea’s practices were rated 4.0 both years on Cluster II. In Year 1, Gary’s Cluster II rating was 1.0 but increased to 3.0 in Year 2. Luis’ Cluster II rating was 1.0 for both years. The correlation between Cluster II teacher ratings and ORF gains was strong in both Year 1 ($r = .75$) and Year 2 ($r = .70$), suggesting a strong relationship between Year 2-type literacy practices and end-of-first-grade oral reading fluency.

Relationship Between the Quality of Instruction in First Grade and the Number of Students Reading Below Established Benchmark Thresholds

The ORF pretest mean for the four classrooms (collapsed across the two years ($N = 8$ classrooms)) was 21.02 WPM, ranging from 10.16 to 28.06. ORF posttest classroom means ranged 36.86 to 81.92 (see Tables 2 and 3). The average gain in ORF was 38.98 WPM. The range of gains was 24.15 to 34.81 WPM in Year 1, and 36.53 to 59.25 WPM in Year 2. The mean gains were computed (see Tables 2 and 3), but the standard deviations were large, indicating extraordinary variability in oral reading fluency growth among students in each class.

Thresholds suggested by Good et al. (2002) on the DIBELS measures indicate that students reading below 40 WPM at the end of first grade are potentially at risk, and students reading below 20 WPM at the end of first grade are in danger of being at risk. In Year 1, 27 of the 51 students (53%) read below 40 WPM, and 19 of those (70%) read below 20 WPM at the end of first grade. In Year 2, many fewer students were at risk; 10 of 60 (17%) were “possibly at risk” (below 40), and 4 out of 10 (40%) read below 20 WPM.

In part, as illustrated in Tables 2 and 3, the assessed effectiveness of literacy instruction was higher in the Year 2 sample. In addition, it is likely that teachers, on average, became more comfortable with the strategies and techniques in the state’s new research-based framework for teaching beginning reading. Thus, there is reason for guarded optimism.

To further explore the relationship between assessed effectiveness and reading performance, the number of students reading below 40 WPM by the end of first grade was tallied by classroom and compared to individual ELCOI scores (Tables 2 and 3). In Year 1, classroom practices rated “3” or higher were associated with 7 of the 27 students reading below 40 WPM, and only 2 of those were reading below 20 WPM. In Year 2, practices rated “3” or higher on ELCOI had only 2 of the 10 students reading below 40 WPM (see Tables 2 and 3). Classroom practices rated “1” or “2” were associated with 64% to 85% of students reading below 40 WPM and 23 students reading 20 WPM or lower (see Tables 2 and 3). The correlation between the number of students reading 20 WPM or lower and ELCOI ratings is strong ($r = -.81$).

Relationship Between End-of-First-Grade ORF and End-of-Third-Grade ORF and Passage Comprehension: Followup Data

By the end of third grade ($N = 59$), correlations between end-of-first-grade ORF and end-of-third-grade ORF were still moderately strong ($r = .51$). The correlation between end-of-first-grade ORF and end-of-third grade passage comprehension standard scores was also moderately strong ($r = .51$). The correlations between end-of-third-grade ORF and end-of-third-grade passage comprehension ($N = 59$) was strong, indicating the strong relationship between ORF and passage comprehension for the ELs in this sample ($r = .73$).

First-Grade Reading and Subsequent Identification with Learning Disabilities

By following students to the end of third grade, we found that from the original 111 students in this sample from both Year 1 and Year 2, 9 were ultimately labeled as having learning disabilities (8.1%). This figure is in line with national referral rates. Eight of the nine

students referred for special education services were reading below 20 WPM at the end of first grade, and one was reading 23 WPM.

Of the nine, four students who were eventually labeled had Luis as a teacher, and two had Gary in Year 1. We are not able to draw conclusions from this limited sample about these findings. We don’t know how their profiles would look if they had received the Tier 1 and Year 2-type instruction in first grade.

Examples of Tier 1 Instruction only vs. Tier 1 Plus Year 2 Classroom Practices

The teachers who were rated as highly effective were also those who used Tier 1 plus Year 2-type instructional practices. In the first and second year, Micah (3.75, 3.5) and Andrea (3.5, 3.75) both had extremely high ELCOI mean scores and high gains in oral reading fluency among their students (see Tables 2 and 3). Micah’s Year 1 mean gain was 34.81 WPM; her Year 2 mean gain was 49.0 WPM. Andrea’s Year 1 mean gain was 32.10 WPM; her Year 2 mean gain was 59.25 WPM. Both teachers provided Tier 1 plus Year 2 instruction on their own during both years.

In contrast, Luis (2.0, 2.5) and Gary (2.0, 3.0) used Tier 1 instruction alone the first year. Luis’ Year 1 mean gain was 26.53 WPM, and his mean gain in Year 2 was 36.83. Gary’s Year 1 mean gain was 24.15 WPM, and the Year 2 mean gain was 49.50 WPM. In the second year, Gary added Year 2-type instruction, and students made much greater growth in reading fluency and accuracy.

In general, teachers received higher ratings and had higher gain scores on oral reading fluency in Year 2. Teachers did not receive training; however, they were being regularly observed, and they knew that students were being assessed. In addition, during Year 1 the district teachers, along with the rest of the country, began to be indoctrinated with the National Reading Panel (2000) information. In Year 1, only Micah used a structured phonics-centered reading curriculum, but in Year 2 three of the four teachers used a similar curriculum on school district recommendations. Literacy practices were rated higher in Year 2, and gains in oral reading fluency among students in the four classrooms were higher than in the previous year.

The primary goal of this section is to utilize the data we collected from the field notes (Graves, 1999-2001), the ELCOI ratings, and interviews to provide examples of Tier 1 vs. Tier 1 plus Year 2-type instruction. Where feasible, we link the field notes to items or concepts in ELCOI when describing the Tier 1 plus Year 2 instruction. Examples are provided to assist teachers who are working to develop RTI-type models with ELs during the reading and language arts portion of the day in first

grade. We include descriptions of teaching practices that were moderately to strongly correlated with student outcomes.

Micah

Micah's practices were rated 3.75 and 3.5 in two consecutive years on the ELCOI and 4.0 both years on Cluster II. In Tier 1 instruction in both Year 1 and Year 2, Micah used a very structured reading program that seemed to include what Micah called a "comprehensive, systematic curriculum with special emphasis on phonological awareness and phonics." Our analysis of this series indicates that her analysis was apt. It consisted of a whole-group session daily for approximately 30 minutes in which students began with sound-symbol practice. From there, students did word buildup, word reading practice, and sentence reading practice. Micah also had students read individually at their desks and in a special individual session with her once a week. Micah's lessons followed a predictable sequence each day. In Micah's interview, she informed us that she felt it essential to use a structured, systematic core reading program oriented toward helping students learn to read.

A typical morning. Micah's morning began every day with singing of standard American songs such as "It's a Grand Old Flag" or "This Land Is Your Land." The students first read the words of the songs in unison from large wall charts and then sang together. This was followed by a series of opening routines – counting the number of boys and girls present, noting the weather conditions, and writing the date on the board. Each morning one student led activities.

Micah used a system for calling on students in which she kept a jar of small sticks with each of the children's name on them and pulled sticks from the jar until all of the names were called. She did this throughout the day as cited in numerous observations. This system appeared to allow the teacher to give undivided attention to one student at a time and to assist her in providing appropriate wait time to each individual child. The ELCOI taps this crucial aspect of teaching in items such as "Elicits responses from all students" and "Selects and incorporates students' responses, ideas, examples, and experiences into lesson."

Micah typically began a whole-group reading lesson with phonemic awareness and phonics. Students listened to words and were asked to speak the sounds they heard. Field notes indicate that Micah was "focused on student engagement" and "maintained student attention." Routinely, she asked students to perform tasks such as changing words by retaining the ending and giving the word a different beginning. Given the word pan she said: "Change the 'p' (sound) to 't' (sound) and now what word do we have?" During these lessons,

students read words and sentences, and constructed new words and sentences.

The following is an example of how Micah modeled distinctive features in words:

Watch me change this word from bead to bend. (Teacher erased the "a" and wrote an "n.")
Now what word do I have? Who can show me bead? Who can show me bend?

Micah tended to draw pictures to demonstrate the meaning of unfamiliar words and provide examples of words being read. In this sense, she typified the practices in Figure 1 under the cluster *Sheltered English Techniques*. For example, when the word *cloak* was read on a list, Micah said:

When I was a girl in school, we kept our coats on hooks in what was called the cloak room. A cloak is like a coat. Kung Pao can you go and get your cloak and show it to the children?

After the completion of this whole-group practice, students generally returned to their desks for 15 minutes of writing practice and 15 minutes of independent reading in decodable texts. Students wrote and read words they had been taught during the previous segment. Spelling words for the weekly tests were consistent with words students were learning to read. Students practiced writing spelling words as part of the daily activity and were then asked to generate sentences using the words. For these reasons, her ratings were high on the ELCOI cluster *Phonics and Phonemic awareness*.

During the next 20 minutes of the morning, Micah typically read an interesting story to the children, asking them questions about the story as she read. She often asked them to illustrate their favorite part in the story or write about it in their journals.

Field notes for both Micah and the teacher to follow, Andrea, indicate they each had amassed multiple sets of decodable texts and used them regularly to enhance student reading. In both classrooms, students had their own boxes of books at their desks, including books of different genres and reading levels. Each student had at least 50% of the books in their box at their own level of decoding. Both teachers gave nightly homework and required students to complete their homework at recess if it was not returned. The homework appeared to be individualized so that students received practice work at a level near their own point of independent practice. Several observations confirmed a daily homework check, and students were required to self-correct errors.

Micah's Year 2 instruction. Micah's instruction for low performers during both years was small-group work some time in the morning when other students were working on writing or reading independently in their seats. Field notes and interviews indicate that these

sessions took place approximately three times a week for about 25 minutes each. In both Year 1 and Year 2, the group size varied from two to four students depending on Micah's assessment of need. In Year 1 four students and in Year 2 three students were most often in the group, receiving at least three small-group sessions per week throughout the year.

For this instruction, Micah used an alternative reading scope and sequence with an emphasis on teaching sound-symbol relationships that are not easily confused with mastery at each step. For example, in this scope and sequence the "a" sound is taught with the most frequent and easiest consonants until students can read words to mastery such as *man, sat, Sam*, etc. Next, students learn the "i" sound and a few more consonants to mastery. The "a" and "i" sound words are then mixed in words to require discrimination to mastery (*and, in, fit, fast*, etc.). The "o" and "u" sounds are taught gradually the same way and the "e" sound comes last. The letter names are emphasized and taught again when the "magic e" rule is introduced in words such as *cake* and *made*.

Andrea

Andrea was rated 3.5 and 3.75 in two consecutive years on the ELCOI and 4.0 in two consecutive years on Cluster II. Andrea's Tier 1 instruction as documented by observations and interviews was created by pulling from many sources. She had the option to use the systematic, scripted lesson plans from the reading series used by Micah, but in an interview she stated that she preferred not to do so. Although she discussed a scope and sequence for teaching reading when interviewed, she did not have exact written sources. Nevertheless, we observed her providing explicit instruction in critical domains for reading instruction, such as phonological awareness, phonics, concepts about print, spelling, writing, comprehension, and critical thinking. She seemed to have the scope and sequence in her head by this stage of the school year. She was observed consistently conducting ongoing assessments on reading and writing progress, though she was not observed conducting oral reading fluency assessment.

A typical morning. A typical morning in Andrea's room began with her reading the students a story or factual piece on a relevant topic. She methodically explained new vocabulary, questioned students about the words' meanings, encouraged students to use the words in longer sentences, and explained concepts important for understanding the story. She used these brief "read-aloud" experiences to build vocabulary and listening comprehension in her students. Every 5 minutes or so, she asked an array of both inferential and literal questions. These were often questions that linked

this story to others or to concepts they had previously discussed.

Vocabulary in the story was used as a means of building understanding of English language. For example, in a story in which characters lived in a *valley*, Andrea placed a good deal of emphasis on the concepts high and low, using a large wall-chart picture of the characters' homes in the valley with sea level homes in the distance.

During a story she might ask, "What do you think Sam was thinking about here? How do you know?" As students answered, always raising their hands and waiting to be called upon, Andrea would say, "Yes, that makes sense. How do you know he was sad? (waiting for a student to respond ... then going on) Would you be sad if this happened to you?" Observers consistently noted Andrea's ability to select and incorporate students' responses, ideas, and experiences into lessons. One observer wrote: [Andrea] "has exceptional expertise in engaging students in meaningful interactions about text." Thus, she received high ratings on that ELCOI item as well as others in the clusters relating to vocabulary development and interactive teaching, such as "incorporating students' ideas into discussions."

After a 20-minute read-aloud segment first thing in the morning, students moved to their desks to begin the morning routine. Field notes indicate a consistent requirement that students write one half page a day in their journals with clearly defined tasks such as: "Write a letter to 'Sam's friend' in the story we read and tell him why he should listen to Sam."

In Andrea's class, written work and readings focused on weekly themes. During one observation, the theme was apples. Andrea read a book (with beautiful pictures) about an apple tree and the phases of the tree throughout the year. She read about the buds turning to flowers in the summer and asked students what they thought would happen next. One student said, "Apples will grow." Andrea said, "In what season do you think the apples can be picked?" She reached into the air, pretended to pick an apple from a branch, and repeated, "picked" slowly while demonstrating the action. The student replied, "Halloween." In response Andrea said:

Yes, near Halloween. Does anyone know what season that will be? Let's see (thinking aloud): In winter time, we saw the tree bare with no buds or flowers (pointing to the picture of the bare tree and pretending to shiver). In spring time, we saw the tree with buds and in summer time; we saw the tree with flowers turning into little green apples (gaining melodic tones in her voice and adding that the birds are chirping and everything is fresh and new).

Continuing, one student raised her hand and said, "In the autumn, I think we will have apples." Andrea said,

“Yes, Araceli, in AUTUMN.” Andrea articulated with ultra-clear diction and dramatic facial expressions, much like a stage actress from an earlier era. Each student had his or her own book in the shape of an apple in which the phases of the apple tree were depicted. They took turns reading the simple sentences at the bottom of each page and went back to their seats to color the pages. Field notes contain consistent references to Andrea’s dramatic facial gestures used to convey meanings of words like *surprise*, *anxious*, or *proud*.

Andrea’s Year 2 instruction. Five days a week Andrea had a rotation of four groups. During Year 1 and Year 2, the largest group was composed of the highest performing students in the class. She met the largest group and the two middle groups for about 10 to 15 minutes a day. Andrea’s Year 2 instruction was for the lowest performing students in the class (four students in Year 1 and three students in Year 2). Field notes and interviews indicated that this group met from 20 to 30 minutes each time. The sessions typically started with a review of flashcards of letters for which students were to supply the sounds. For example, when the students saw “th” they would say, “th.” Andrea used picture clues and key words for most of the sounds. For example, the “th” card had a picture of a spool of thread on it. After about 5 minutes of this, she asked students to practice reading lists of words they had previously read in the group. She typically gave each student an individual turn reading a short list of words that were decodable based on the sounds students had mastered. Next, she took out a set of small books that were written at about the level of the students in the group.

One of the first books these students were observed reading was about African animals. Andrea began by asking the students to look at the pictures and tell what they thought the story might be about. Next, she read the title, and the group read the story together out loud. “This is a baby lion ... this is a baby zebra,” and so on. Immediately, she had the students reread the book, taking turns reading. After this, each student read the book again individually. Andrea modeled word attack strategies and comprehension strategies requiring students to make predictions and draw conclusions while reading. Students wrote down new words on their individual word lists (similar to word banks but in list form). Before the students left the session, they were told to read their journal entry from the day before. Andrea required students to write in their journals each day during seatwork time, working from either an unfinished sentence or a prompt. They read their entries and she corrected the spelling and grammar. The students were to go immediately back to their seats and rewrite the entry.

Luis

For his Tier 1 instruction in Year 1 (ELCOI rating 2.0), Luis used Tier 1 instruction alone the first year. Interviews and observations suggest that Luis was attempting to uphold the system required at the time by the school district, which recommended the following practices: shared reading, guided reading, read-aloud, and independent reading.

A typical morning. First thing in the morning, Luis typically “read aloud” to his students, reading various popular stories from Eric Carle and other picture books. Immediately following, students read independently for 20 to 30 minutes. Students were encouraged to select books from Luis’ classroom collection that were interesting to them. Unfortunately, the students could rarely read the selected books. Typically, during this time students whispered quietly with books in hand, but on task; sustained reading was rare to see. During this time, Luis typically completed planning and talked with individual students about the reading.

During the second hour of the morning, Luis typically engaged in the joint reading of a basal text with the students (shared reading). For example, one day during the reading of a poem about snow Luis asked: “What do you hear when it snows? What do you hear when someone throws a snowball against a tree?” The children appeared to be listening, but no one responded. Luis and the children read on together in the poem, including a reference to “bump, thump, dobble, dop” in the poem. Luis asked: “Is the author talking about music? (no response) No the sounds of winter. Let’s look at some pictures of snow in winter. We don’t have winters like this in San Diego. Who has seen snow?” Luis called on only a few students, who simply shook their heads or said, “No.”

About twice a week Luis invited three groups of six or seven students to come up and read a story with him at his table; this practice was Luis’ interpretation of “guided reading.” This was conducted in heterogeneous groups of students; that is, the students were not at the same reading levels when grouped together. Thus, he violated one of the major premises of guided reading. Students were asked to read individually, but many students could not read the text. Higher readers read more, and Luis patiently waited for students to struggle through text when it was difficult. Unlike Micah, he did not provide immediate feedback or support when students were struggling. Because this group instruction was heterogeneous, not frequent, and not explicitly intensive, it could not be considered Year 2 instruction (ELCOI Cluster II rating 1.0).

Students who were not in the guided reading group worked on art projects related to the daily “read-aloud,” completed handwriting and spelling tasks, and at times

listened to books on tape. Student work was typically replete with errors, and there appeared to be no systematic way of providing corrections.

In Year 2 (ELCOI rating 2.5), Luis adopted a series that was more focused on phonics and phonemic awareness than the one used in Year 1. He did not follow the script included in the series, but he did have whole-group lessons from the series about three times a week. He generally did this instead of the Shared Reading described from Year 1. Otherwise, most of the practices for Year 1 were still included in his practices in Year 2.

In Year 2 he also posted signs for each of the sounds as recommended by the reading series he adopted. He used the workbook that accompanied the series for assignments several times a week. During whole-group instruction, Luis was fairly good at keeping students attending, but lower performers were less attentive and less involved. He did not often call on lower performing students. He did not explicitly provide any additional instruction to low performers according to our observations and to the interviews with him (ELCOI Cluster II rating 1.0).

Gary

Year 1 of this investigation was Gary's second year teaching (ELCOI rating 2.0). He too was attempting to follow the school district plan requiring shared reading, guided reading, read-aloud, and independent reading.

A typical morning. First thing in the morning, Gary conducted a very brief group session that included explaining to students the events of the morning and a read-aloud of a popular children's book. Immediately following this 15-minute session, students would begin seatwork or be called to a group with Gary for reading of what were called "leveled books." The group time lasted from 15 to 20 minutes. According to observations and interviews, students were not assigned by reading ability, and no special emphasis was placed on low performers (Cluster II rating 1.0). One group of eight students consisted of all Spanish speakers. Though Gary's Spanish was limited, he occasionally used Spanish words to attempt to clarify concepts. Students would read through the books, and Gary would patiently wait for them to finish sentences without going back and rereading the text. The reading was largely incomprehensible when listening. The other two groups were mixed readers, with stronger readers answering most questions and reading a larger portion of the text.

During Year 2, Gary's approach changed dramatically (ELCOI rating 3.0). He continued the reading aloud to students and the seatwork practices. However, he changed to a more structured reading series that focused intensively on phonics and phonemic awareness. This

was the series used by Micah in Years 1 and 2 and by Luis in Year 2. A typical morning in Year 2 began with a whole-group lesson for students with structured practice and abundant active involvement of all the students. For the most part, Gary followed the script exactly. Later in the morning he called groups by reading level. He had them divided fairly evenly into groups.

Year 2 instruction. The lowest performing students met in a group together. Gary usually worked with them for about 20 to 25 minutes to review the sounds from the whole-group lesson. He had students read individually and reread text that was recommended by the reading series to accompany the lessons (Cluster II rating 3.0). In contrast to the type of group sessions he held with the other students, he did a type of drill and practice of words from the group lesson. The other groups simply read leveled books and discussed the text, much as they had in Year 1. He was much improved from Year 1, but he did not appear to teach as much phonics and phonemic awareness explicitly to his lower performers as did the other more highly rated teachers.

DISCUSSION

This descriptive study documented the effects of response-to-intervention type of practices in four first-grade classrooms of English learners (ELs) from 11 native languages in three schools in a large urban school district in Southern California. Observations and interviews in four classrooms across two consecutive years were compared to first-grade gains in oral reading fluency ($N = 111$). Reading fluency data were examined in relation to ratings of literacy practices, including the degree to which Tier 1 alone or Tier 1 plus Year 2 instruction was implemented.

The correlation between classroom ratings on the ELCOI and gain from pre- to posttest in first grade on oral reading fluency was moderately strong in both Year 1 ($r = .61$) and Year 2 ($r = .57$). The correlation between Cluster II teacher ratings and ORF gains was strong in both Year 1 ($r = .75$) and Year 2 ($r = .70$), suggesting a strong relationship between Year 2-type literacy practices and end-of-first-grade oral reading fluency. Results indicated a strong correlation ($r = -.81$) between the number of students below DIBELS's benchmark thresholds at the end of first grade and the teacher rating on the amount of instruction provided for low performers. Followup data at the end of third grade in oral reading fluency and comprehension indicate moderately strong correlations to first-grade scores ($N = 59$).

The pattern for students who were ultimately labeled as having learning disabilities was that all 9 were reading 23 WPM or lower at the end of first grade. The results indicate a moderately strong relationship

between teacher rating on the full ELCOI measure and gains in ORF at the end of first grade. Also, by the end of third grade, ORF was strongly correlated with reading comprehension in the .6 to .7 range, indicating that the correlation for native English speakers and English language learners is similar (Gersten et al., 2005; Graves, Gersten, & Haager, 2004; NICHD, 2000).

Andrea (both years) and Gary (in Year 2 only) met daily with small, relatively homogeneous groups based on reading ability. These teachers had the low performers in a group and provided instruction according to need all year. Micah (both years) called only the lowest performing students into a small group and also worked with these students individually. Both appear to be reasonable approaches towards providing Tier 2 instruction in that, in all three cases, struggling readers spent about a half hour a day in some kind of intensive small group for reading practice.

Luis, on the other hand, was not observed using any type of small-group instruction, despite the reasonably strong body of research supporting this practice (Elbaum, Vaughn, Hughes, & Moody, 1999; Foorman & Torgesen, 2001). In addition, Luis tended not to provide students with specific feedback when they made mistakes in reading or in written products. The deleterious effects of this practice on English learners have been eloquently articulated by Reyes (1992).

The field notes on the two teachers with the highest growth both years included many examples of the practices tapped in ELCOI: high student engagement, ample opportunities to use newly learned skills, time spent reading, appropriate length for the various literacy activities, clear, explicit models of proficient performance, and daily attention to struggling readers through specialized small-group instruction. These are similar to the recommendations of Foorman and Torgesen (2001).

They also demonstrated use of the techniques commonly advocated for teaching academic content to English learners (Echevarria & Graves, 2007). These include use of facial gestures and pictures to help define words, encouragement for elaborate and meaningful responses, and structured student opportunities to speak English, creating an environment where students feel comfortable speaking in a second language, and attention to vocabulary development. In fact, the focus on vocabulary development was extraordinary in Andrea's class. Most researchers hypothesize that this is a critical feature of beginning reading instruction for ELs (August & Siegel, 2006; Gersten & Baker, 2000).

Although the three teachers with high ratings in Year 2 were similar in many respects, they differed dramatically in one important characteristic – reliance on a core reading series to systematically build phonemic

awareness, decoding knowledge and fluency, and comprehension skill.

Andrea, with the more eclectic and less structured approach, may exemplify the rare, highly skilled teacher who has the depth of knowledge and experience to provide the systematic and explicit instruction without the guidance and structure of a commercial reading program. However, Andrea is likely the exception rather than the rule in being able to manage such efficiency without a structured basal reader. In fact, when Luis and Gary diverged from the basal reading program in Year 1, neither was able to produce the same results as Andrea; her adjustments seemed to be based on her knowledge of literature and her pedagogical knowledge of teaching beginning reading.

First-Grade Reading and Subsequent Identification with Learning Disabilities

By following students to the end of third grade, we found that from the 110 students in this sample, 9 were ultimately labeled with learning disabilities (9%). Of these students, 8 were reading below 20 WPM at the end of first grade and 1 was reading 23 WPM. These data suggest that end-of-first-grade oral reading fluency of 23 or less is a serious cause for concern in English learners.

Five of the nine students who were labeled were in the two lowest ranked settings in Year 1. Teachers with the higher ratings tended to have either none or a very small number of students in this clear “danger zone.” Teachers with low ratings had from 79% to 81% of their students reading 20 WPM or lower at the end of first. In the setting in which teaching practices received the lowest ratings two years in a row, the largest percentage of students read 20 WPM or lower.

The most vivid example of a practice that could have been associated with poor student reading was Luis's choice to build 30 minutes of independent reading into the morning. The valuable reading instruction time could have been utilized much more effectively to address 81% of the students who were essentially non-readers (see Table 2). The leading hypothesis generated from this descriptive study is that intensive Year 2-type instruction incorporated into the first-grade year would have likely changed this outcome for the students in Luis's classroom.

Limitations of the Study

The small sample of classrooms and students is the central limitation of this work. As a result, our emphasis throughout has been on the descriptive nature of the investigation. We were only able to generate correlations that yielded evidence about the relationship that may exist between oral reading fluency and teacher practices. Experimental studies with much larger sample

sizes are needed to continue to explore causality vis-à-vis beginning reading instruction for English learners and the amount they learn.

Educational Implications

The data we have presented lend credence to the assertions made by the National Research Council's (2002) report on factors leading to disproportionate representation of minorities in certain special education categories. That is, the panelists concluded that a major cause, though not the only cause, is the weaker quality of instruction found in many classrooms in schools serving low-income minority children. The examples of Andrea, Micah, and Gary demonstrate the pivotal role a first-grade teacher with sound knowledge of reading research and decent curricula tools can play in dramatic reduction of reading failure.

This study indicates that a version of RTI in which teachers incorporate intensive small-group instruction along with excellent whole-group instruction holds promise for first-grade instruction of English learners. It could provide assurances that those who are labeled with learning disabilities have issues that require special services beyond that which general education can provide. As has always been the case with any model, RTI cannot be a panacea. It will only be as good as the knowledge and preparation of the general and special education teachers who implement it.

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