A study evaluated reaching achievement for three groups of first-grade students: (1) those receiving phonics instruction utilizing the "Open Court" phonics materials integrated with the District's language arts curriculum; (2) those receiving phonics instruction in the context of guided and shared reading activities ("Phonics in Context"); and (3) a control group receiving no special program beyond normal instruction. Reading pretest results and a measure of socio-economic status revealed remarkable similarity among the groups. In regard to recent staff development and experience with first-grade curriculum, there was little difference between the teachers involved in the study. End of year posttest reading achievement showed no significant differences among the three groups on the Test of Early Reading Ability-2nd Edition, and the same was true for the Running Record assessment that measured level of oral reading proficiency. The Stanford Achievement Test showed no significant differences between the Open Court and Phonics in Context groups, but did show significant differences between Open Court and the Control group on all three subtests. The Phonics in Context group also outperformed the control group on the Stanford Word Study Skills subtest as well as on the Stanford Total Reading score. Results of a parent survey showed high levels of enthusiasm and parent satisfaction for each of the reading programs. Teacher interviews revealed high levels of enthusiasm for both treatment programs. (Contains six tables and three figures of data.) (Author/SR)
A COMPARISON OF TWO APPROACHES TO FIRST GRADE PHONICS INSTRUCTION IN THE RIVERSIDE UNIFIED SCHOOL DISTRICT

Thomas J. Barrett, Ph.D.

ABSTRACT

The Language Arts First Grade Field-test evaluation focused on reading achievement for three groups of students: (1) **Open Court Integrated Model**: those receiving phonics instruction utilizing the Open Court phonics materials integrated with the District's language arts curriculum, (2) those receiving phonics instruction in the context of guided and shared reading activities (**Phonics in Context Integrated Model**), and (3) a **Control** group of students at school receiving no special program beyond that which occurs through the school's on-going staff development.

Reading pretest results obtained at the beginning of first grade, and a measure of socio-economic status (SES) revealed remarkable similarity between the three groups, thus making a direct comparison of their post-test reading scores feasible. In addition to SES, and pre-test reading readiness, information was collected regarding the background of the teachers. In regard to recent staff development and experience with the first grade curriculum, there appeared to be little difference between the teachers involved in the study.

End of year post-test reading achievement showed no significant differences between the three groups on the **Test of Early Reading Ability-2nd Edition** (TERA2). The Running Record assessment that measured level of oral reading proficiency showed the same pattern of small but statistically insignificant differences between the groups. The third measure, the **Stanford Achievement Test**, showed no statistically significant differences between the Open Court and Phonics in Context groups but did result in significant differences between Open Court and the Control group on all three Stanford reading sub-tests: Reading Comprehension, Word Reading, and Word Study Skills. The Phonics in Context group also outperformed the Control group on the Stanford Word Study Skills sub-test as well as on the Stanford Total Reading score.

Results of a parent survey showed high levels of enthusiasm for each of the reading programs with no significant group differences reported in parent satisfaction with student progress in reading. Teacher interviews revealed high levels of enthusiasm for both treatment programs although the on-going delivery of in-service to the Phonics-in-Context group throughout the year made it unlikely that the full effects of the program could be determined from end of year results.
Language Arts Field Test

OVERVIEW

The purpose of the First Grade Language Arts Field Test was to provide information which will lead to improved reading instruction and achievement for all RUSD students. Since the new state English Language Arts instructional materials adoption will occur in 1996, one purpose of the field test was to provide the district with an informed basis for making decisions regarding instructional materials. Equally important was the opportunity to improve our understanding of effective reading instruction and English Language Arts implementation.

Three sets of first grade, English-only classrooms, participated in the field test representing two treatment groups (Open Court and Phonics in Context) and a control group. Selection of classes for the three groups was based on teacher and school readiness and teacher interest in participating. An attempt was made to have representation across the district within each set and, to the extent possible, to involve schools with similar percents of children receiving a free or reduced price lunch. Principals were asked to recommend experienced teachers who could be expected to fully implement the respective field test programs. The final selection resulted in five Open Court, seven Phonics in Context, and four Control group classrooms participating. Table 1 shows the program design.

<table>
<thead>
<tr>
<th>Program Parts</th>
<th>Open Court</th>
<th>Phonics In Context</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated Model</td>
<td>Core Literature</td>
<td>Core Literature</td>
<td>Core Literature</td>
</tr>
<tr>
<td>Spelling Through Phonics</td>
<td>Spelling Through Phonics</td>
<td>Spelling Through Phonics</td>
<td></td>
</tr>
<tr>
<td>Published Phonics Kit</td>
<td>District Phonics Materials/Program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced Training</td>
<td>Sustained Training Program</td>
<td>Sustained Training Program</td>
<td></td>
</tr>
<tr>
<td>Designated Support Strategies</td>
<td>Reading Materials Sent Home Daily</td>
<td>Reading Materials Sent Home Daily</td>
<td></td>
</tr>
</tbody>
</table>

PROGRAM DESCRIPTIONS

Open Court Phonics — This field test program focused on the use of the phonics materials and strategies developed by Open Court Publishing and the integration of those materials with our district's adopted literature program. Follow-up observations and coaching were also included.
The integrated Open Court Phonics and literature model required the purchase of the Open Court Phonics Kit: Alphabet-Sound cards, Teacher's Resource Binder, and the Storybook Kit.

The integrated Open Court Phonics and literature model was already being implemented in the a nearby school district. Specifically, the model includes systematic instruction in phonics and decoding skills throughout first grade using all of the materials listed above. Implementation for Open Court consisted of a scheduled set of daily activities which included 60 minutes of phonics supplemented by other literacy activities. Students took home reading material each day. Teachers were to integrate phonics instruction with both the Houghton-Mifflin literature series and the Wright and Rigby reading books to promote independent student reading. This model is in alignment with the language arts instructional focus of our K-5 schools and K-3 Reading and Writing classroom assessment standards. These standards focus on instruction in phonics, spelling, the identification of resources which will support all students being able to select books at a comfortable reading level, and the systematic monitoring of student progress.

Staff development included two full-days of training in late August followed by three afternoon follow-up sessions in October, February, and April. Least one on-site visitation to the classrooms. The cost of this staff development was $500 per day.

**Phonics in Context.**—The Phonics in Context group included teachers who were completing the second year of the RUSD K-3 Literacy Training Program. Phonics in Context required eight sets of Rigby or Wright group Big Books and Little Books at a cost of $400 - $500 per classroom. Houghton-Mifflin literature and Wright and Rigby reading books were used to promote independent reading in both sets of classrooms.

The Phonics in Context model was developed by district teachers, Staff Development Specialists, Instructional Services Specialists, and mentor teachers. It matches the recommendations in the California Department of Education document entitled “Ready, Set, Read” and focuses on developing a reading program which allows for extension of student learning, opportunities for students to interact with difficult text, and opportunities for students to practice on “independent” reading level texts. The major instructional activities for Phonics in Context were Shared Reading and Guided Reading. Letter-sound relationships (phonics) were emphasized using these strategies. Students took home independent reading materials each day. The 1994-95 school year was the first time this training program was implemented.

District Staff Development Specialists and mentor teachers provided three full-days of staff development from September 30 to October 28 and another full-day in both March and April. Half-day inservices were provided in December, January, and February. These demonstration lessons utilized shared and guided reading strategies and emphasized skill development. Teachers were further supported by classroom visitations and coaching as well as on-site demonstration lessons provided by District Staff Development Specialists.

**Control Group.**—The teachers in the control group did not receive any special training. They continued their implementation of the RUSD first grade English Language Arts course of study and only participated in school site staff development. Students in the control group were assessed, however, in the same manner as for the other two groups. As with the other two groups, an effort was made to match the classes demographically.
DATA COLLECTION

Data collection extended from September 1994 through June, 1995. Reading achievement outcome measures were varied and included a widely used nationally normed reading test, an individually administered test of early reading ability, and a teacher scored assessment of oral reading proficiency used in the district’s Reading Recovery program. In addition to reading achievement measures, parents were surveyed to ascertain their perceptions of their child’s progress and to provide information about their child’s reading behavior at home.

To gather information about the programs from those involved, teachers from the Open Court and Phonics in Context programs were interviewed along with the Staff Development Specialists assigned to support the implementations. Finally, to determine background characteristics of the teachers and characteristics of their classrooms, teachers were asked to complete a questionnaire administered in the fall.

A short description of each instrument and the role it played in the evaluation follows:

**Data from Students:**

1. **Test of Early Reading Ability-2nd Edition (TERA-2)**
   - **Pretest/Posttest**
   - The TERA-2 (PRO-ED, 1991) was administered as a pretest in the fall and also as a posttest in the spring. This individually administered test of early reading skills is highly reliable and provides information on progress made throughout the year. It could also be used to adjust the outcome measures for student differences in reading readiness that existed at the beginning of the program, if necessary.

2. **Reading Recovery Running Record**
   - **Pretest/Posttest**
   - Taken from the Reading Recovery (Clay, 1979) assessment battery, the Running Record was individually administered by teachers in a natural setting during both the first and third trimesters using high interest transitional books. The student’s highest level of oral reading ability at 90 percent or higher accuracy was identified using books that were leveled from 1 to 9 by one of the district’s Reading Recovery Specialists.

3. **Stanford Achievement Reading Subtests (Word Reading, Word Study Skills, and Reading Comprehension)**
   - **Posttest**
   - The Stanford Primary I Reading subtests (The Psychological Corporation, 1989) are nationally normed and group administered at the end of first grade only. The Word Reading subtest measures vocabulary while the Word Study Skills subtest focuses directly on phonics (decoding) skills. Reading Comprehension, of course, measures the ability of students to read short sentences and passages and answer questions about what they have read.
Data from Teachers:

(1) Teacher Background Questionnaire

The Teacher Background Questionnaire sought to provide information about teacher staff development training, years of teaching experience at the early grades (especially first grade), and characteristics of the teachers’ classrooms. The primary purpose was to ascertain if there were background differences that could be expected to affect reading achievement independent of the specific program implemented.

(2) Teacher Interviews (Open Court and Phonics in Context only)

The Open Court teachers were interviewed in a group setting in April to obtain feedback about their perceptions of the program. Likewise, the Phonics in Context teachers were also interviewed.

Data from Parents:

(1) Parent Telephone Survey

Parents of students in all three groups were surveyed by phone and were requested to answer several questions dealing with the perception of their child’s reading progress as well as questions relating to how much exposure to reading their child experienced at home.

(2) Parent Occupation as a measure of Socio-Economic Status (SES)

Parent occupational levels were coded using a five-point scale based on information provided by parents on the student registration record. The coding of parent occupational levels was completed by the teachers who administered the TERA-2 to students during the spring. The categories were the same as those used by the California Assessment Program to gauge parent socio-economic status—a variable consistently found to be highly correlated with student achievement and one, therefore, that needs to be considered when looking at reading outcomes.

Other:

(1) Interviews with Staff Development Facilitators/Trainers

The two, RUSD Staff Development Specialists, assigned to the program were interviewed to obtain their perceptions of both the Open Court and Phonics in Context program implementations, respectively.

(2) Phone Interview with Open Court Trainer

The Open Court trainer, was interviewed by phone during the same interval as the Staff Development facilitator interviews.
DATA ANALYSIS PROCEDURES

Comparisons of the reading scores for the three groups were made using analysis of variance. Both the pretest TERA-2 data and the parent occupation information were analyzed to determine if covariate adjustments in end of year outcomes would be necessary. These two variables were expected to be substantially related to reading outcomes at the end of first grade and, therefore, need to be considered. The three reading measures consisting of the Stanford Total Reading score, the TERA-2 score, and Running Record level, were taken as a composite in the initial multivariate analysis to define “reading achievement.” Follow-up analyses of the individual reading achievement measures were then conducted, as needed, to investigate which of the measures showed differences among the field test groups.

Teacher profiles were developed for each of the three groups from the Teacher Questionnaire to provide information relating to possible differences in teacher instructional skills, past staff development training, and classroom characteristics that could be expected to affect program outcomes.

Parent telephone survey results were reported for each of the three groups by directly comparing the percents of parents responding to the various response options on the six questions asked. The average scores on the scales were then compared for the three groups using analysis of variance.

Teacher and staff observations were summarized through narratives constructed from interview notes.

EVALUATION RESULTS

Description of the Sample

The composition of the field test groups (Table 2 - Appendix A) was similar except for the number of Chapter 1 students where the Phonics in Context group had a larger number, and the number of Reading Recovery students where the Control group had a smaller number. Both Reading Recovery and Chapter 1 students are identified "high risk" students in reading and receive supplementary instruction in a small group (Chapter 1) or individual basis (Reading Recovery).

The Parent Occupation Scale used in the study was the same as the indicator used by previous State assessments. The categories are as follows:

1 - Unknown
2 - Unskilled Employees
3 - Skilled and Semi-skilled Employees
4 - Technical, Sales, and Administrative Support Workers
5 - Managers and Professionals

Parent occupation, as is the case in most studies of this type, is substantially related to achievement outcomes. Student performance at the end of first grade is also highly related to student test scores at the beginning of first grade. As a consequence, it is necessary to
account for any group differences on these two variables when reporting performance levels on the reading tests. The correlations between the pre-test TERA-2 scores and the posttest measures as well as the correlation between SES (parent occupation) and the posttest measures are shown in Table 3 - Appendix A. These correlations have a possible range from 0 (no relationship) to 1.00 (perfect relationship).

Table 4 - Appendix A shows the performance of the three field test groups on the Pretest TERA-2 and the measure of SES (parent occupation). It is clear that the groups were remarkably equivalent on both these measures, especially the Open Court and Phonics in Context groups. Tests of statistical significance of the differences between groups were found to be non-significant. Consequently, there appeared to be no need to adjust posttest outcomes for these two measures using analysis of covariance and direct comparison of the three groups on the three reading measures was done in the interest of simplicity.

Analysis of Results

As described earlier, three instruments were used to measure reading achievement in the field test: Test of Early Reading Ability (TERA-2), the Running Record, and the Stanford Achievement Test. The initial analysis tested the significance of the differences in reading achievement for the groups with reading defined as a composite of all three reading measures. The results of this multivariate analysis of variance showed that reading achievement differed significantly among the three groups defined in the field test. Consequently, follow-up univariate analyses were run to investigate (a) which groups differed significantly from one another, and (b) on which of the reading measures they differed (Table 5).

Table 5 shows the results including those of the Stanford subtests. Because of the need to consider the pretest reading performance and SES, the analyses included only cases having a valid TERA-2 pretest score and a known parent occupation level. With the exception of the Running Record which is on a 1-9 scale, all results are in terms of normal curve equivalent (NCE) scores which range from 1-99 with 50 indicating average performance.

The following graphs are taken from Table 5 and show the results for the three major reading achievement measures used in the study.
Figure 1

TEST OF EARLY READING ABILITY
MEAN NCE

* No significant differences.

Figure 2

RUNNING RECORD LEVEL MEAN
SCORE

* No significant differences.
Figure 3

STANFORD TOTAL READING MEAN NCE

* No significant difference between Open Court and Phonics in Context. Significant difference between Open Court and Control and between Phonics in Context and Control.
Table 5
Reading Achievement Posttest Means

<table>
<thead>
<tr>
<th>Posttest Variables</th>
<th>Open Court Integrated Phonics in Context</th>
<th>Control</th>
<th>Significant Group Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model(OC)</td>
<td>(PC)</td>
<td></td>
</tr>
<tr>
<td>TERA-2</td>
<td>63.3</td>
<td>60.7</td>
<td>59.3</td>
</tr>
<tr>
<td></td>
<td>N=93</td>
<td>N=94</td>
<td>N=86</td>
</tr>
<tr>
<td>Running Record</td>
<td>6.8</td>
<td>6.6</td>
<td>6.5</td>
</tr>
<tr>
<td></td>
<td>N=82</td>
<td>N=89</td>
<td>N=82</td>
</tr>
<tr>
<td>SAT Total Reading</td>
<td>52.2</td>
<td>49.0</td>
<td>42.3</td>
</tr>
<tr>
<td></td>
<td>N=78</td>
<td>N=87</td>
<td>N=83</td>
</tr>
<tr>
<td>SAT Reading Comprehension</td>
<td>51.7</td>
<td>47.6</td>
<td>43.7</td>
</tr>
<tr>
<td></td>
<td>N=78</td>
<td>N=87</td>
<td>N=83</td>
</tr>
<tr>
<td>SAT Word Reading</td>
<td>51.2</td>
<td>49.8</td>
<td>44.5</td>
</tr>
<tr>
<td></td>
<td>N=78</td>
<td>N=87</td>
<td>N=83</td>
</tr>
<tr>
<td>SAT Word Study Skills</td>
<td>53.1</td>
<td>50.5</td>
<td>39.5</td>
</tr>
<tr>
<td></td>
<td>N=78</td>
<td>N=87</td>
<td>N=83</td>
</tr>
</tbody>
</table>

* Statistically significant at a 95% confidence level
** Statistically significant at a 99% confidence level

The highest observed mean TERA-2 posttest score was for the Open Court group followed closely by the Phonics in Context group (Figure 1). However, the difference among all three groups was not statistically significant. The 2.6 NCE difference between the mean NCE for Open Court and that of the Phonics in Context group is about one item out of a maximum possible score of forty-six.

For the Running Record measure of oral reading achievement, the differences were not large enough to be statistically significant between any of the groups (Figure 2). The mean level for each of the three groups was at a normal end of first grade level.

Stanford Achievement Test results (Figure 3) show that both the Open Court and Phonics in Context groups scored significantly higher than the control group but they did not differ significantly from each other. To provide some perspective, the difference between the mean score of 52.2 for Open Court and 49.0 for Phonics in Context translates to about three items on the seventy item Total Stanford Reading Test.

Another way to look at performance of the groups is to compare their results on the Reading Comprehension test to districtwide results from the last time we gave the test in all first grade classrooms. The mean scores for Reading Comprehension were 51.7 for Open Court, 47.6 for Phonics in Context, and 43.7 for the Control group. The results for all three groups are either equal to or higher than the districtwide mean of 42 registered in the spring of 1993.
Teacher Interviews

Four of the five Open Court (OC) teachers were present at the interview session on April 24, 1995. Seven of the eight Phonics in Context (PC) teachers were present for their interview session on April 25. The following summary contains responses to the questions that were asked during the interview although the session was unstructured enough that teachers were free to make any comments that they wanted to make.

A summary of teacher responses is given below:

How adequately did the training prepare you to implement the program?

Both OC and PC groups were enthusiastic in their support of the training and the persons conducting the training sessions. Although a few sessions were missed in both groups, it did not appear to be substantial enough to be of major concern for the study. Because of the different nature of the two programs, the OC group felt generally confident that they received what they needed to implement the program while the PC group felt that ongoing inservice would have been desirable since they were learning new teaching methods and strategies. The PC group also believed that they did not have adequate funding to reproduce and purchase materials and felt that this was a drawback for their program.

The PC group believed that the training would have best been conducted prior to the beginning of the school year and, therefore, the program wasn't fully in effect for the entire school year. The training didn't begin until October and major parts of the program were still being presented after mid-year. For OC, the major two-day presentation of the materials and how to use them was done in August so implementation came much closer to being in effect for the full year.

How quickly have teachers gotten “up to speed” in implementing the program?

For OC, teachers had the two major inservice days in August prior to school starting. Even though there were follow-up sessions in the fall and spring, the major elements of the program were introduced in time to begin implementation early in the year. Nonetheless, with teacher changes occurring early in the year, the trainer believed it wasn't until November that students could benefit fully from the program. Although most teachers reported adapting quite well to the program, at least one teacher reported having more difficulty. One teacher at a year-round school started a couple of months into the school year and, therefore, was behind the other teachers in the number of lessons delivered. For PC, the first training session wasn't until September 30th with several sessions occurring after December. Teachers did not believe they had enough exposure to concepts and skills to expect much of an impact until the second semester of the 1994-95 school year. Although a couple of the teachers were implementing at a high level by the spring, a couple of others were still struggling. One reason given were the many and varied demands being placed on teachers for other staff development and assessment collection activities. A couple of the PC teachers also experienced health related and other personal problems that caused them to miss more than one training session and delayed implementation. An illness in the family of one of the OC teachers may have affected implementation in her classroom as well.
What have been the strengths and weaknesses of the program as you see them?

Open Court:

Strengths: The teachers were very impressed with the trainer and her skills and would recommend her for any future inservices. OC teachers knew that they had systematically introduced everything to the students and while middle and high level readers don't have to depend as much on phonics, it is important for the lower level readers. The students enjoyed the program and were very enthusiastic during the OC sessions. Parents also made many positive comments about the program. One teacher indicated that in her judgment, her students were doing better than her previous classes.

All but one of the OC teachers had gone through the district's literacy program and felt comfortable with the integration of OC into a whole language program.

Another perceived strength is that two of the teachers had used OC in other districts before coming to RUSD.

Weaknesses: The controlled vocabulary books were not really necessary and were not used very much although they may have been best for the lower level readers who were struggling. The books were seen as boring and the vocabulary as contrived so other literature was used for the most part. Also, the time allocated to OC may have been too much at about an hour per day. The group recommended that the amount of time spent on the delivery of phonics be shortened to four days per week and less than an hour per day.

In addition, one teacher commented that while she had hoped that the OC program would have especially helped the lowest achieving students, she observed that this group still struggled even with the OC program. Another teacher emphasized that she didn’t see how she could attribute student performance to the OC program itself since so many things changed in her instructional program. Specifically mentioned was the fact that students were now being allowed to take books home for the first time and this could be expected to make a substantial difference.

The running record levels were seen as confusing because of the color-coded levels. Teachers also noted that the Wright and Rigby books, used for the running records and the guided reading groups, were not readily available.

Phonics in Context:

Strengths: Teachers felt that the day-long training was better than the part-day training. All felt that they had access to language arts experts for the training. One teacher mentioned that her kids were handling the Houghton-Mifflin literature materials better than previous classes. Others mentioned that students were seeing parts of words and words-within-words better now. They also mentioned a sense of enthusiasm among students that the changes in their instruction had created. At Liberty, all first grade teachers went through the training even though not all were part of the study. It was felt that this was a special strength at Liberty since all teachers at the grade level can be “on the same page” so to speak and could support one another. Another perceived strength of the program was that it was very much aligned with the Language Arts Framework and a whole language philosophy.
Weaknesses: Teachers had to prepare and reproduce large volumes of materials which they felt should have been provided by the district. The running record levels were seen as confusing because of the color-coded levels. While the running record was important for the program, they didn’t think they did it especially well given the time requirement. This was the perception even though all participating teachers were provided two days with a substitute at the end of both the first and third trimesters to complete the running records. Another perceived weakness was that the Wright and Rigby books were not available in some classrooms until December so students could not take books home until then.

In summary, some of the major conclusions from the Teacher Interviews included:

- Both Open Court and Phonics in Context teachers were enthusiastic about the quality of training.

- Both Open Court and Phonics in Context teachers believed their teaching had improved and their students were more successful as a result of the respective programs.

- Although the Open Court group felt that they didn’t get things running smoothly until a couple of months into the school year, the Phonics in Context group indicated that major components of their program were still being delivered at mid-year. As a consequence, the PC group believed that results of the study would reflect only a partial implementation.

- Both groups indicated that increased exposure of students to reading at home as a result of a new district emphasis could account for part of the student progress.

- The Open Court group while adamant, in general, about continuing the use of the materials next year, believed that less time should be spent on the Open Court component.

- Both the Open Court and Phonics in Context groups each included one year-round school which was in session for two to three months prior to the inception of the staff development inservices. This delayed implementation could be expected to negatively impact any gains made as a result of the respective programs at these schools.
Teacher Survey

Teachers participating in the field test were surveyed during the first trimester in order to construct a profile of the teachers in the three groups. The survey covered: (1) background and teaching experience including recent staff development, (2) the level of support from aides and volunteers and how much time is typically devoted to reading instruction, and (3) extent to which students spend time in other settings through teaming and special programs like Chapter 1. Results of the survey are given below:

<table>
<thead>
<tr>
<th>Years teaching at school:</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Court</td>
<td>11</td>
</tr>
<tr>
<td>Phonics in Context</td>
<td>15</td>
</tr>
<tr>
<td>Control</td>
<td>9</td>
</tr>
</tbody>
</table>

Recent Grade Levels taught:

All teachers had taught at the primary level for the past three years and all but four teachers surveyed had taught first grade for at least two of those three years. Consequently, there appears to be little difference between the groups on this factor.

How were you assigned to the class?:

All but a couple of teachers indicated that they usually taught at first grade and that is why they were assigned to the class. Two teachers indicated that they did not volunteer but were assigned to the class by their principal (Phonics in Context). There appears to be little difference between the groups on this factor.

Do you have instructional aides in your classroom?:

None of the Open Court or Phonics in Context teachers indicated that they had aides in their classrooms. Three of the six control group teachers reported that they had aides (two had 1 and one had 2). These aides spent 30 minutes a day five days a week in two of the three classes and the other had a 3-hour aide five days a week.

How many volunteers do you typically have?:

All teachers reported at least one volunteer and typically it was two or three. A couple of the teachers reported five to eight volunteers (one Phonics in Context; three control, and one Open Court). The average amount of hours per day and days per week were:

<table>
<thead>
<tr>
<th>Days Per Week</th>
<th>Hours Per Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Court</td>
<td>1</td>
</tr>
<tr>
<td>Phonics in Context</td>
<td>1</td>
</tr>
<tr>
<td>Controls</td>
<td>4</td>
</tr>
</tbody>
</table>

There appears to be a substantial difference between the Control group and the others in amount of volunteer time with the Control group classes averaging four days per week having volunteers while the two treatment groups reported approximately 1 day per week.
Number of minutes you read to your class:

Here there were also some differences reported as follows:

<table>
<thead>
<tr>
<th></th>
<th>Days Per Week</th>
<th>Minutes Per Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Court</td>
<td>5</td>
<td>21</td>
</tr>
<tr>
<td>Phonics in Context</td>
<td>5</td>
<td>33</td>
</tr>
<tr>
<td>Controls</td>
<td>5</td>
<td>30</td>
</tr>
</tbody>
</table>

While there was little difference between the Control and the Phonics in Context groups, the Open Court teachers reported spending less time reading to the class. It should be noted that these responses were given early in the school year and should not be assumed to reflect what was happening later in the year when the respective programs were fully implemented.

Do you team or exchange students with another teacher for Language Arts?:

Only one of the Open Court teachers and one of the Phonics in Context teachers reported that they team teach for Language Arts. None of the Control group teachers reported team teaching for Language Arts.

Do any of your students go to a Chapter 1 or RSP teacher for pull-out programs?:

One Open Court (7 students), four Phonics in Context teachers (an average of 7 students), and one Control group teacher (2 students) indicated that they had students who were pulled out of class for Chapter 1 or RSP programs.

Recent Staff Development:

All five of the Open Court teachers reported having gone through the district’s Language Arts Literacy training and two indicated having had the Wright Group training. Other inservice indicated included: Improving first grade methods, reading methods, TESA, McCracken, reading specialist, and a masters degree at UCR.

All six of the Phonics in Context teachers indicated having had the Literacy Training and three reported training in the running record. Three reported Wright Group training and all six reported McCracken training.

Of the Control group teachers, five reported having the Literacy Training and two reported McCracken and Wright Group training. Other inservices indicated were: running record, reading recovery, whole language, and guided reading.

Clearly, there was no difference between any of the groups in terms of exposure to the first-year Literacy training. All three groups appear to have similar staff development backgrounds as evidenced by some of the common inservices attended recently. Consequently, there appears to be little difference between the groups on this factor.
Parent Telephone Survey

During April and May, a telephone survey was conducted wherein an attempt was made to contact all parents of students who were enrolled in the field test classrooms since the beginning of the school year. The survey consisted of six questions. Questions 1 through 3 asked about the child's reading behavior at home while questions 4 and 5 asked about the child's attitude toward reading as perceived by the parent. Question 6 asked about general satisfaction with their child's reading progress. Parents were also given the chance to answer an open-ended question regarding the main reason for their satisfaction or dissatisfaction as a follow-up to question 6.

Of the 465 students who took the TERA-2 pretest, 362 parents, were successfully contacted. However, this represented a high percentage of the students remaining in the field test classrooms at the end of the year as shown in Table 6 which compares the number of parents contacted to the number of students tested with the TERA-2 in May.

<table>
<thead>
<tr>
<th>TABLE 6</th>
<th>Parent Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Court</td>
<td>Parents Contacted</td>
</tr>
<tr>
<td>Phonics in Context</td>
<td>114</td>
</tr>
<tr>
<td>Control</td>
<td>147</td>
</tr>
<tr>
<td>Control</td>
<td>101</td>
</tr>
</tbody>
</table>

The number and percent of parents responding to each response option for the survey questions are presented below. The average score (mean) on the four or five point scale used in the survey is also reported on the right-hand side of each table. This enables one to evaluate the statistical significance of the differences in average ratings between the groups.

Results are as follows:

1. How many days per week on average does your child either read or get read to at home by an adult or other family member for homework, before bedtime, or at other times?

<table>
<thead>
<tr>
<th></th>
<th>Everyday</th>
<th>5-6 days</th>
<th>3-4 days</th>
<th>2 days</th>
<th>1 day</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Court</td>
<td>43(38%)</td>
<td>41(36%)</td>
<td>24(21%)</td>
<td>5(4%)</td>
<td>1(1%)</td>
<td>4.05</td>
</tr>
<tr>
<td>Ph. In Context</td>
<td>42(29%)</td>
<td>60(41%)</td>
<td>36(25%)</td>
<td>9(6%)</td>
<td></td>
<td>3.92</td>
</tr>
<tr>
<td>Control</td>
<td>30(29%)</td>
<td>32(32%)</td>
<td>32(32%)</td>
<td>7(7%)</td>
<td></td>
<td>3.84</td>
</tr>
</tbody>
</table>

*No significant differences among the group averages.
### 2. How many minutes on average does your child either read or get read to on these days?

<table>
<thead>
<tr>
<th>Minutes</th>
<th>30+ min.</th>
<th>20-25 min.</th>
<th>15 min.</th>
<th>10 min.</th>
<th>5 min.</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Court</td>
<td>34(30%)</td>
<td>43(38%)</td>
<td>31(27%)</td>
<td>6(5%)</td>
<td>2(2%)</td>
<td>3.92</td>
</tr>
<tr>
<td>Ph. In Context</td>
<td>39(27%)</td>
<td>52(36%)</td>
<td>41(28%)</td>
<td>13(9%)</td>
<td>1(1%)</td>
<td>3.79</td>
</tr>
<tr>
<td>Control</td>
<td>16(16%)</td>
<td>29(29%)</td>
<td>44(44%)</td>
<td>10(10%)</td>
<td>2(2%)</td>
<td>3.47</td>
</tr>
</tbody>
</table>

* Significant differences between the averages for OC and C and between PC and C. No significant difference between OC and PC.

### 3. How many days per week on the average does your child pick-up a book on his/her own to read or ask someone to read it to him or her?

<table>
<thead>
<tr>
<th>Days</th>
<th>Everyday</th>
<th>5-6 days</th>
<th>3-4 days</th>
<th>2 days</th>
<th>1 day</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Court</td>
<td>36(32%)</td>
<td>23(20%)</td>
<td>40(35%)</td>
<td>5(4%)</td>
<td>10(9%)</td>
<td>3.61</td>
</tr>
<tr>
<td>Ph. In Context</td>
<td>54(37%)</td>
<td>36(25%)</td>
<td>33(22%)</td>
<td>16(11%)</td>
<td>8(5%)</td>
<td>3.76</td>
</tr>
<tr>
<td>Control</td>
<td>33(33%)</td>
<td>15(15%)</td>
<td>24(24%)</td>
<td>18(18%)</td>
<td>11(11%)</td>
<td>3.41</td>
</tr>
</tbody>
</table>

* No significant differences among the group averages.

### 4. How much does your child like to be read to by an adult or other family member?

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Very Much</th>
<th>Some</th>
<th>Not much</th>
<th>Very little</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Court</td>
<td>95(84%)</td>
<td>16(14%)</td>
<td>1(1%)</td>
<td>1(1%)</td>
<td>3.81</td>
</tr>
<tr>
<td>Ph. In Context</td>
<td>102(69%)</td>
<td>33(22%)</td>
<td>9(6%)</td>
<td>3(2%)</td>
<td>3.59</td>
</tr>
<tr>
<td>Control</td>
<td>75(75%)</td>
<td>21(21%)</td>
<td>2(2%)</td>
<td>2(2%)</td>
<td>3.69</td>
</tr>
</tbody>
</table>

* Significant differences between the averages for OC and PC.

### 5. How much does your child like to read on his/her own?

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Very Much</th>
<th>Some</th>
<th>Not much</th>
<th>Very little</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Court</td>
<td>71(63%)</td>
<td>36(32%)</td>
<td>5(4%)</td>
<td>1(1%)</td>
<td>3.57</td>
</tr>
<tr>
<td>Ph. In Context</td>
<td>81(56%)</td>
<td>36(25%)</td>
<td>11(8%)</td>
<td>16(11%)</td>
<td>3.26</td>
</tr>
<tr>
<td>Control</td>
<td>56(56%)</td>
<td>33(33%)</td>
<td>4(4%)</td>
<td>7(7%)</td>
<td>3.38</td>
</tr>
</tbody>
</table>

* Significant differences between the averages for OC and PC.
6. In general, how satisfied have you been with your child’s progress in learning to read at school this year?

<table>
<thead>
<tr>
<th></th>
<th>Very Satisfied</th>
<th>Satisfied</th>
<th>Dissatisfied</th>
<th>Very Dissatisfied</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Court</td>
<td>72(63%)</td>
<td>38(33%)</td>
<td>3(3%)</td>
<td>1(1%)</td>
<td>3.59</td>
</tr>
<tr>
<td>Ph. In Context</td>
<td>78(54%)</td>
<td>52(36%)</td>
<td>10(7%)</td>
<td>4(3%)</td>
<td>3.42</td>
</tr>
<tr>
<td>Control</td>
<td>58(58%)</td>
<td>31(31%)</td>
<td>6(6%)</td>
<td>5(3%)</td>
<td>3.42</td>
</tr>
</tbody>
</table>

* No significant differences among the group averages.

These results show a somewhat higher degree of parent satisfaction reported by the Open Court parents, but the differences were not statistically significant. Student enjoyment of reading is also somewhat higher for Open Court as measured by questions 4 and 5 but higher for Phonics in Context as measured by question 3. Questions 1 and 2 suggest that students may have read more at home in the Open Court group.

**Parent Comments**

Even though not all parents commented on why they were satisfied or dissatisfied with their child’s reading progress in 1994-95, the vast majority did state a reason. The percentage of parents making positive comments mirrored the results of the multiple response question (#6) with 96%, 88%, and 87% making positive comments for the Open Court, Phonics in Context, and the Control group, respectively.

For **Open Court**, positive comments fell into five major categories with the percentage of total positive comments falling into each category as follows:

- Child reading well/making good progress — 43%
- Child has good teacher — 7%
- Child likes/is interested in reading — 22%
- Specifically likes Open Court (phonics program) — 18%
- Likes how child brings books home every night — 10%

Negative comments were:

- Child is advanced but will not let him move on—keeps all at same level
- Child needs more one-on-one teaching
- Materials too easy and require no imagination
- Child hasn’t learned how to read yet—difficult to understand how reading program was presented

For **Phonics in Context**, positive comments were as follows:

- Child reading well/making good progress— 62%
- Child has good teacher — 15%
- Child likes/is interested in reading — 19%

Negative comments included:
• Not getting enough enrichment from GATE
• Child can't read well enough (7)
• Teacher needs to help more (2)
• Not enough phonics (1)
• Difference between what teacher says and what I see at home
• Child can't stay still so he can't read
• Doesn't bring reading material home
• I was responsible for child's reading—not school

For the Control group, positive comments were as follows:

Child reading well/making good progress—68%
Child has good teacher—16%
Child likes/is interested in reading—16%

Negative comments included:

• Does not teach the right way
• Child not getting enough attention
• School doesn't emphasize reading enough (2)
• Child can't read well enough (2)
• School says child has handicap in reading
• Class needs to be taught all in one level in reading
• Because they are not helping improve his reading
• Doesn't feel that phonics methods are being used; doesn't like pictures used in reading

Limitations of the Study

It should be acknowledged that in any study conducted in a natural setting like school classrooms, there exist several factors that cannot be adequately controlled and that could lead to alternative interpretations of the results.

Although pretest achievement levels and parent socio-economic status were controlled statistically, there are potentially many other things that could have affected the outcomes. Certainly one of the most problematic is the difficulty in adequately controlling for differences in school climates and teacher talent. Although the profile developed for teachers in the study showed several similarities and did not give a gross indication of teacher differences, the existence of such differences cannot be ruled out. Also the teachers in the two treatment groups were, for the most part, self-selected and especially enthusiastic about participating. Thus they may not be representative of first-grade teachers districtwide.

In addition, since many components of the literature-based program implemented by the Phonics in Context group were also present in the Open Court Program, it is very difficult to separate out the effects of the phonics component per se on student achievement. Likewise, the effects of participation in Chapter 1 programs could be expected to affect reading outcomes, especially for the Phonics in Context group which included 20 Chapter 1 students, as opposed to three Chapter 1 students in the Open Court group. The control group did not include Chapter 1 students.
Conclusions:

The observed mean scores on the posttest TERA-2 and the Running Record levels were highest for Open Court followed closely by Phonics in Context. However, these differences were not large enough to project confidently to a larger population of first graders. Performance on the Stanford Achievement test showed the same pattern with no significant differences between the two treatment groups. Differences between Open Court and the Control group were, however, large enough to be statistically significant. Differences between the Phonics in Context and Control group were significant for Stanford Word Study Skills and Stanford Total Reading.

Teacher interviews revealed staff who were equally enthusiastic about their respective programs. Both groups had members indicating that they felt students had made more progress than past classes. Key points noted also included the fact that the Phonics in Context group believed that test results would only reflect a partial year implementation given the fact that key parts of the inservice did not occur until mid-year. In addition, since the program is really attempting to change the way teachers approach instruction, the skills taught take time to hone and perfect. While the Open Court group was enthusiastic about continuing use of the materials, it was thought that the hour per day required for the phonics component was somewhat excessive and should be reduced.

Parents surveyed were generally satisfied with their child’s reading progress with the Open Court parents somewhat more positive. These differences regarding satisfaction did not prove, however, to be statistically significant. Questions about how much their children liked to read were responded to more positively by the Open Court parents and this result was statistically significant.

Questions about the background of the teachers participating in the study and classroom characteristics apart from the field test programs showed differences regarding the number of volunteer hours utilized (the Control group had more volunteers) and the number of minutes spent reading to the students (the Open Court group indicated less minutes early in the year). However, other questions relating to recent staff development and experience teaching at the first grade revealed little difference between the teacher groups.

In summary, this study clearly shows that at least on the measures of reading achievement used in this study, students appear to be responding well to both the Open Court integration with whole language as well as to the Phonics in Context methods. In addition, each treatment group outperformed the Control group students.
Descriptive statistics for the three field test groups showing various demographic and other characteristics of the samples are presented below.

### TABLE 2
**Selected Demographics**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Open Court</th>
<th>Phonics in Context</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td># of RSP Students</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td># of LEP Students</td>
<td>4</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td># of Chapter 1 Students</td>
<td>3</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td># of Reading Recovery Students</td>
<td>7</td>
<td>12</td>
<td>5</td>
</tr>
</tbody>
</table>

### TABLE 3
**Correlations between Variables and Reading Achievement**

<table>
<thead>
<tr>
<th>Posttest Reading Measures</th>
<th>TERA-2 (Pretest)</th>
<th>SES</th>
</tr>
</thead>
<tbody>
<tr>
<td>TERA-2</td>
<td>.99</td>
<td>.30</td>
</tr>
<tr>
<td>Running Record</td>
<td>.92</td>
<td>.58</td>
</tr>
<tr>
<td>Stanford Total Reading</td>
<td>.87</td>
<td>.64</td>
</tr>
</tbody>
</table>

### TABLE 4
**Average Scores on TERA-2 Pretest and SES**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Open Court</th>
<th>Phonics in Context</th>
<th>Control</th>
<th>Significant Group Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>TERA2 (Pretest)</td>
<td>48.7</td>
<td>48.7</td>
<td>51.8</td>
<td>None</td>
</tr>
<tr>
<td>N=94</td>
<td>N=94</td>
<td>N=86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent</td>
<td>3.8</td>
<td>3.9</td>
<td>3.8</td>
<td>None</td>
</tr>
<tr>
<td>Occupational Level (SES)</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
<td>None</td>
</tr>
<tr>
<td>N=94</td>
<td>N=94</td>
<td>N=86</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>