

**Office of Shared Accountability
Montgomery County Public Schools
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**Reading Initiative Study
Year 2 Assessment Report**

Suzanne Raber

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Dr. Pamela Hoffer-Riddick
Associate Superintendent for Shared
Accountability

Dr. Marlene Hartzman
Director, Office of Shared Accountability

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Reading Initiative Study Year 2 Assessment Report

EXECUTIVE SUMMARY

Introduction

The Reading Initiative is a comprehensive program designed to ensure that all students are fluent and comprehending (on-grade-level) readers by the end of second grade. During the 1998-99 school year, the Reading Initiative was introduced in 54 Phase 1 schools. During 1999-2000, the program was expanded to the remaining 64 elementary schools—referred to as the Phase 2 schools.

After the first year of the Reading Initiative, the Office of Shared Accountability (then known as the Department of Educational Accountability) reported on the planning and development process, program implementation issues, and program outcomes (see *Reading Initiative Study: Year 1 Report*). This current report is one in a series of documents related to the study of the Reading Initiative and examines two critical assessment issues^a:

- **Measurement Properties of ECAP:** Is the Early Childhood Assessment Program (ECAP)-Reading a valid and reliable measure of Grade 2 student reading performance?
- **Student Outcomes in Reading:** How well are Grade 2 students performing in reading? Has Grade 2 reading performance improved since the Reading Initiative was first implemented?

Since the introduction of the Reading Initiative, MCPS has embarked on the **Call to Action**—a more comprehensive set of initiatives that includes major improvements in the related areas of literacy and early success. To evaluate these new initiatives as well as the existing Reading Initiative, we need to understand how to appropriately measure student achievement in early literacy skills. These measures, once validated, can then be used to determine the current status of student performance in reading after two years of similar efforts and to evaluate the **Call to Action** initiatives in literacy and early success.

Major Findings

When used appropriately, ECAP is a valid and reliable measure of Grade 2 reading performance.

In our first opportunity to examine the measurement properties of the Grade 2 ECAP in Reading, we found that the assessment appears to be a valid and reliable measure of Grade 2 reading

performance. That is, we found a strong relationship between student performance on the Grade 2 ECAP-Reading and other established, nationally normed measures of reading: the Grade 2 CTBS (Reading and Language) and the Grade 3 CRT-Reading. We also found that both components of ECAP, running records and performance assessments, can be scored consistently across different teachers and schools. There was, however, considerable variation among schools in school-based scoring of performance assessments. This finding suggests that when schools score their own papers, reliability needs to be monitored while staff acquire more training and experience. Furthermore, this finding speaks to the need for increased attention to the implementation of ECAP across schools.

Data from the Grade 2 CTBS and the Grade 3 CRT validate our rigorous Reading Initiative performance goal.

Our analyses also supported, as a rigorous proficiency standard, the Reading Initiative goal that students read at the fluent stage with partial or essential

comprehension by the end of Grade 2. Specifically, we found that only those students reading at the fluent stage with written comprehension at the partial or essential level by the end of second grade scored above the MCPS mean on the Grade 2 CTBS (Reading and Language) and the Grade 3 CRT (Reading). Consistent with MCPS efforts to "raise the bar," the mean performance of students meeting this Reading Initiative goal was at the 70th to 80th percentile nationally, indicating that this goal is a rigorous one, when compared to national performance norms.

The ECAP data suggest cautious optimism regarding student progress in reading.

Using ECAP to examine the status of reading performance in Phase 1 and 2 schools

during 1999-2000, we found that 77 percent of the students were reading at the fluent stage by the end of second grade. And like last year, we found evidence of student progress during second grade (from mid-year to June) in all schools. Finally, student performance improved from Winter to June for all demographic subgroups, with at-risk students (those receiving ESOL, special education and free and reduced-price meal services, African-American and Hispanic students) in Phase 1 schools making the greatest gains. This finding has implications for closing the performance gap between White and Asian students and their African American and Hispanic peers.

Still, we have a long way to go in meeting our reading performance standards for all students.

We also found, however, that about one-half of our students did not meet the Reading Initiative goal of reading at the

fluent stage with partial or essential written comprehension by the end of Grade 2. And like last year, there was considerable variation in performance across schools. As a group, Phase 1 schools did not perform as well as Phase 2 schools. The variation among both Phase 1 and Phase 2 schools suggests that while some schools are making progress in implementing the Reading Initiative, other schools may need additional support and monitoring to achieve full implementation. We also found considerable variation in performance among different demographic groups. At-risk students (those who have received ESOL, special education or free and reduced-price meal services), as well as African American and Hispanic students, did not perform as well as their not at-risk peers on the ECAP measures.

Still early in the implementation of this program, while slightly more students are reading at the fluent stage at the end of second grade, we found limited evidence of overall improvement in student reading performance since the introduction of the Reading Initiative.

Next, we looked at whether student performance in reading has improved since the introduction of the Reading Initiative in 1998-99. While slightly more students are reading at the fluent stage at the end of second grade, we found

no difference in the percentage of students who met the Reading Initiative goal (reading at the fluent stage with partial or essential written comprehension) from June 1999 to June 2000. In addition, looking at students who were enrolled in Phase 1 schools during 1998-99, we found no increase in Grade 3 Reading CRT scores among students exposed to the program for one year, compared to earlier cohorts who had not experienced the Reading Initiative. It is probably too soon to expect significant increases in reading performance after only one year of student and staff experience with this new program and with the ECAP assessments. Still, the explanation probably lies at least in part in the uneven implementation of the Reading Initiative across schools (see *Reading Initiative Study: Implementation Report*).

Recommendations

The assessment findings reported here have several implications that lead to the following recommendations:

- ***The data support the continuation of the Early Childhood Assessment Program (ECAP) as a measure of student reading performance in Grade 2, for the purpose of monitoring student progress and providing instructional feedback to teachers.*** Additional data from the Spring 2000 administration of the Grade 3 MSPAP-Reading and the content open-ended portion of the Grade 3 CRT-Reading will hopefully tell us whether ECAP can

help Kindergarten through Grade 2 teachers “scaffold for success” on Grade 3 measures like MSPAP.

- **MCPS should proceed with considerable caution regarding the use of Grade 2 ECAP-Reading as a school-level accountability measure.** While we have demonstrated that ECAP can be scored consistently across teachers and schools, we found considerable variation in the reliability of school-based scoring of performance assessments, especially in some schools. Schools should continue scoring their own papers to benefit from the instructional feedback that scoring can provide. But **we must reinforce teacher training and monitor teacher use of ECAP.** And specifically, we should monitor the reliability of school-based scoring, using “expert” scorers outside the school to score a randomly selected sample of papers from each school. Moreover, the data missing from the system-wide ECAP database suggest that **more attention must be given to the implementation issues in capturing ECAP data for future use.** Finally, we must consider the implications of using ECAP as an accountability measure when such use will likely change how teachers view the results and what they choose to emphasize in their instruction.
- The results reported here are based on the Grade 2 ECAP assessment materials that were used over the last two years. ECAP is being expanded during 2000-2001 to incorporate new books in Grade 2 and to include Pre-kindergarten through Grade 1. **We should continue to study the measurement properties of ECAP, especially in new grade levels and with new texts and performance assessments.** This is especially important given the need to evaluate new initiatives in literacy and early success.
- Although there continues to be evidence of student progress during second grade (from Winter to Spring) in all schools, a considerable number of students failed to reach the Reading Initiative goal by the end of Grade 2—a goal that we have shown to be relatively rigorous by national standards. While 77 percent of students were reading at the fluent stage by June of second grade, almost half of the students did not demonstrate partial or essential written comprehension at the fluent stage. And students from at-risk demographic groups (ESOL, special education, FARMS, African Americans, and Hispanics) continue to perform less well than their not at-risk peers. Finally, while there was tremendous variation across schools, students in the Phase 1 schools, who were in their second year of the program, performed less well than students in the Phase 2 schools. These findings suggest two things. First, **we must examine why some schools are making progress and reaching our reading performance goals, while other schools are not.** Secondly, **we must continue to support and monitor the implementation of the Reading Initiative, particularly in Phase 1 schools—where many students in some schools continue to perform**

poorly. This is especially important if these students are to make full advantage of the Reading to Learn Initiative in Grade 3.

- We found some evidence of enhanced student progress among our highest risk students (those who have received ESOL, special education or free and reduced-price meal services, as well as African American and Hispanic students). This finding suggests that ***the Reading Initiative may hold particular promise for “closing the gap.”*** At the same time, this year's data contain limited evidence of overall improvement in student reading performance since the introduction of the Reading Initiative. Given that the program is based on proven instructional practices in reading, data from last year's Reading Initiative Study and this year's formative case study of implementation suggest that the explanation may not lie in the quality of the program, but rather the unevenness of its implementation. ***At this point, it is time to refocus our efforts on the kinds of support and monitoring that schools need to successfully implement the Reading Initiative.***

^a The major study questions and the corresponding findings are presented in Exhibit A in the Appendix.

Reading Initiative Study Year 2 Assessment Report

Introduction

The Reading Initiative is a comprehensive program designed to ensure that all students are fluent and comprehending (on-grade-level) readers by the end of second grade. The program includes several components:

- **Training in the balanced literacy approach** for all elementary principals, and staff who teach reading to Kindergarten, Grade 1 and 2 students;
- Staff allocations that allow schools to **reduce class size** to a maximum of 15 students to 1 teacher for Reading Initiative instruction;
- A mandate that all students receive **at least 90 minutes of uninterrupted reading instruction each day**; and
- **Periodic assessment of students** by teachers to monitor progress in reading.

During the 1998-99 school year, the Reading Initiative was introduced in 54 Phase 1 schools—those schools with the highest percentage of students on free and reduced-price meal services (FARMS). During 1999-2000, the program continued in these 54 schools and was expanded to the remaining 64 elementary schools¹—referred to as the Phase 2 schools.

After the first year of the Reading Initiative, the Office of Shared Accountability (then known as the Department of Educational Accountability) reported on the planning and development process, program implementation issues, and program outcomes (see *Reading Initiative Study: Year 1 Report*). This current report is one in a series of documents related to the study of the Reading Initiative and examines student assessment issues (other reports address implementation issues, class size, and technical issues regarding the Early Childhood Assessment Program). This report extends the research conducted during Year 1 on the Early Child Assessment Program (ECAP) and the appropriate measurement of student outcomes in the context of the Reading Initiative. Specifically, this report focuses on two critical assessment issues²:

- **Measurement Properties of ECAP:** Is ECAP-Reading a valid and reliable measure of Grade 2 student reading performance?

¹ During 1999-2000, the Reading Initiative did not include the six elementary schools that serve Grades 3 through 5 or Grades 3 through 6.

² The major study questions and the corresponding findings are presented in Exhibit A in the Appendix.

- **Student Outcomes in Reading:** How well are Grade 2 students performing in reading? Has Grade 2 reading performance improved since the Reading Initiative was first implemented?

The introduction of the Reading Initiative in 1998-99 included the addition of 104 classroom teacher positions to the MCPS annual operating budget; its expansion to all elementary schools during 1999-2000 added another 105.5 teaching positions to the budget. Since the introduction of the Reading Initiative, MCPS has embarked on the **Call to Action**—a more comprehensive set of initiatives that include major improvements in the related areas of literacy and early success. Specifically, this year’s FY2001 budget includes several improvements that are directly relevant to program components of the Reading Initiative:

- **Six additional elementary school reading teachers** that will permit a literacy team in every school (\$298,028);
- The introduction of **17 elementary literacy teachers** available to the community superintendents to assist schools needing help to reach literacy goals (\$714,356);
- The **Grade 3 Reading to Learn Initiative** which will expand Reading Initiative training to Grade 3 teachers to provide an effective transition from “learning to read” efforts in Kindergarten through Grade 2 to “reading to learn” efforts in Grade 3 (\$1,378,954);
- The **“Soar to Success” Program in Grade 3** which will provide training for Grade 3 (and Grade 6) teachers on intervention strategies and curriculum for students who still need support in learning to read following the Reading Initiative (\$221,750); and
- An additional 57 classroom teaching positions to effect **class size reductions in Kindergarten through Grade 2** to an average of 17:1 over the next three years in high impact schools (\$2,338,596).

In addition, MCPS is expanding the implementation of ECAP-Reading during the 2000-2001 school year to include Pre-kindergarten through Grade 1 in all elementary schools, while it continues in Grade 2 in the 54 Phase 1 schools.

To evaluate these new initiatives as well as the existing Reading Initiative, we need to understand how to appropriately measure student achievement in early literacy skills. We also need to better understand the measurement properties of ECAP-Reading and how these assessment data should be used. These measures, once validated, may then be used to determine the current status of student performance in reading after two years of similar efforts and to evaluate **Call to Action** initiatives in literacy and early success.

Detailed Findings

Measurement Properties of ECAP

During the 2000-2001 school year, the Early Childhood Assessment Program (ECAP) continues as a measure of Grade 2 reading performance in the 54 Phase 1 schools, and is being expanded to measure reading performance in Pre-kindergarten through Grade 1 in all elementary schools. There are also plans to expand its Grade 2 implementation to the remaining elementary schools in future years as the budget permits. ***This report, however, is the first opportunity to examine the measurement properties of ECAP—that is, whether it is a valid and reliable measure of student reading performance in Grade 2.*** Through the data the Reading Initiative (RI) Study has collected over the past two years using ECAP materials and procedures, we have attempted to answer the following questions:

- ***Validity:*** Do the student results obtained with ECAP relate to or predict student performance on other established measures of reading, like the Grade 2 CTBS and the Grade 3 CRT?
- ***Reliability:*** Can the components of ECAP, running records and performance assessments, be scored consistently across different teachers and schools?

History of ECAP. ECAP was created in response to the 1997 Committee for Assessment, Design and Implementation (CADI) proposal to develop a system-wide approach for documenting reading (and mathematics) achievement in the early grades. The primary purpose was to help identify students at-risk of failure before the first system-wide and state-level assessments in Grade 3 (the MCPS *Criterion Referenced Test—CRT* and the *Maryland State Performance Assessment Program—MSPAP*). Assessment procedures and instruments were developed during a two-year (1997-99) pilot in seven schools, with the purpose of achieving a measure that could be used both for instructional feedback throughout the school year and for accountability. Grade 2 ECAP was first introduced into the 54 Phase 1 schools during the 1999-2000 school year and is now being expanded to include Pre-kindergarten through Grade 1 reading assessments in all elementary schools. The Grade 2 ECAP provides measures of multiple aspects of reading:

- ***Oral reading fluency*** (stage and accuracy) through running records, and
- ***Comprehension and writing*** through a performance assessment comprised of written constructed response items.³

³ Although ECAP has included both running records and performance assessments since its pilot years, ECAP teacher training has put an increased emphasis on the implications for writing instruction, with more attention to comprehension in the last year (1999-2000).

Reading Initiative Study Use of ECAP. Prior to the Reading Initiative, MCPS had no standardized, system-level measure of reading progress in the first or second grades. To help identify an appropriate measure of Grade 2 reading performance, the RI Study convened a panel of experts on reading instruction, early childhood education, student assessment, and program monitoring in October 1999. This advisory group reached a consensus that such a measure should meet the following criteria:

- Be developmentally appropriate for Grade 2 students;
- Be authentic (consistent and seamless) with Reading Initiative instruction;
- Be administered by a familiar adult;
- Capture performance over time;
- Tap multiple aspects of the early literacy process, including oral reading (fluency), comprehension and writing;
- Provide consistent and reliable results across teachers and schools; and
- Relate to other established measures of student performance in reading.

Since ECAP was developed with very similar criteria in mind, the RI Study adopted the ECAP materials and procedures as an evaluation measure of student reading performance in Grade 2.

Validity of ECAP

Extensive work by teachers and administrators knowledgeable about assessment, literacy instruction, and early childhood has gone into the development of ECAP. Teachers who worked with the RI Study have welcomed ECAP as a valuable instructional tool with the potential of providing consistent student assessment data across schools. Still, until Spring 2000, MCPS did not have available any assessment data to determine whether ECAP predicts performance on other widely-accepted reading measures. That is, does ECAP have concurrent validity—**does student performance on ECAP relate to national achievement in reading, as measured in the same grade (e.g., CTBS)?** And does ECAP have predictive validity—**does it predict performance on other measures of reading in later grades (e.g., CRT)?** These analyses were made easier during 1999-2000 when staff responsible for the development of the Reading Initiative and ECAP, defined as a **reasonable goal for student performance at the end of Grade 2—to be reading at the fluent stage with partial or essential written comprehension.**

Concurrent Validity: Grade 2 Comprehensive Test of Basic Skills (CTBS)

For the first time in March 2000, in response to a state mandate, MCPS administered the *Comprehensive Test of Basic Skills (CTBS)* to all students in Grade 2 (as well as Grades 4 and 6), to provide information on student performance relative to a national sample. The CTBS Reading/Language Arts Test yields scores in Reading and Language. Like most nationally normed

reading tests, the **CTBS requires that all students read the same short passages and respond to multiple-choice questions.** Since the primary purpose of ECAP is to measure student performance specifically in the context of the Reading Initiative and with an eye toward performance on MSPAP, its design is quite different. **ECAP requires that students read a short book at their instructional reading level and answer written constructed response items that tap the MSDE and MCPS reading outcomes—global understanding, developing interpretation, personal and critical response.** While the performance demands of CTBS and ECAP are very different, teachers and administrators reviewing ECAP results need to know how they relate to national standards of reading performance.

To determine the extent to which two measures are related, statisticians typically calculate the correlation between the measures. This analysis requires that each measure be scaled so that the ordinal relationship of all scores is known—that is that one score is always better or higher than another. In the case of ECAP, there are really two scales; a four-point **oral reading proficiency** scale (early emergent, upper emergent, early fluent, fluent) and a four-point **comprehension** scale (none, minimal, partial, essential). These two scales should ideally be combined to indicate reading competency. In combining these two scales, staff responsible for the development of the Reading Initiative and ECAP have now agreed that students should be reading at the fluent stage with written comprehension at the partial or essential level by the end of second grade. However, it is not always clear what combination of oral reading proficiency and comprehension indicates better performance. **For example, is a student reading at the fluent stage with minimal comprehension performing better than a student at the early fluent stage with essential comprehension?** Until we learn more about the ECAP measures, we have decided to rely on mean percentile scores of students at different oral reading stages and comprehension levels to express the relationship between CTBS and ECAP (as well as between CRT and ECAP) rather than on correlations.

To explore the relationship between ECAP and CTBS, we first looked at the most straightforward comparison—the mean percentile scores on CTBS-Reading for students who did and did not meet the Reading Initiative goal of reading at the fluent stage with partial or essential comprehension at the end of Grade 2. Among 892 students tested by the RI Study, we found that those students meeting the Reading Initiative goal in June 2000 had a significantly higher mean national percentile score on the CTBS-Reading (73) than those not meeting this goal (44). This finding also held when we looked at:

- ECAP results from Winter 2000 testing;
- CTBS results from the Language subtest; and

- Assessment results for each group of students studied: students from each racial-ethnic group; and students who had ever received ESOL, special education, or free and reduced-price meal (FARMS) services.

The results for the CTBS-Reading subtest, presented in Exhibit 1, also show that among each demographic subgroup studied, those students who met the Reading Initiative goal by the end of second grade had a mean CTBS-Reading national percentile score equal to or greater than the MCPS mean of 59.

Exhibit 1
Mean CTBS-Reading Percentile Score⁴ for
 Grade 2 Students Making and Not Making the Reading Initiative Goal
 By the End of Second Grade

STUDENT GROUPS	N	<i>Mean</i> for Students Who <i>Met RI Goal</i> by June 2000	<i>Mean</i> for Students Who <i>Did Not Meet RI Goal</i> by June 2000
All Students	892	73	44
RACE/ETHNICITY			
Asian American	116	78	43
African American	181	59	36
White	469	78	54
Hispanic	125	62	31
ESOL SERVICES			
Never ESOL	789	74	47
Prior or Current ESOL	103	60	28
SPECIAL EDUCATION SERVICES			
Never Special Education	757	74	46
Prior or Current Special Ed	135	67	34
FARMS			
Never FARMS	611	77	52
Prior or Current FARMS	281	62	32

More informative are the mean CTBS percentile scores for students at the different stages of oral reading fluency and different levels of comprehension, presented for the CTBS-Reading subtest in Exhibit 2. The data presented in this table (and similar data analyzed for the language subtest and all demographic subgroups) reveal four very interesting findings about ECAP-Reading:

- The well-ordered sequence of increasing CTBS scores across levels of fluency and comprehension indicates a strong relationship between student performance on ECAP and CTBS in Grade 2.
- Only those students reading at the fluent stage with comprehension at the partial or essential level at the end of second grade scored above the MCPS mean percentile score (59 for reading). This finding suggests that attaining

⁴ The *mean* percentile score for Grade 2 CTBS-Reading was 59 system-wide and 60 for all Reading Initiative Study sample students tested in March 2000. MCPS typically reports *median* percentile scores.

the Reading Initiative end-of-second-grade goal predicts above-MCPS average performance on the CTBS.⁵

- Those students reading at the fluent stage with partial or essential comprehension at the end of second grade had mean national percentile scores of 71 and 81 respectively, suggesting that the Reading Initiative goal with its written comprehension component, is a rigorous standard when compared to national performance norms.
- Even those students reading at the fluent stage with performance assessment scores suggesting minimal or no comprehension, had a mean percentile score of 56—close to the MCPS mean of 59. This finding suggests that oral reading fluency alone predicts student performance on the CTBS.

Exhibit 2
Mean CTBS-Reading Percentile Scores⁶
 For Grade 2 Students at Different Reading Stages and Comprehension Levels
 At the End of Second Grade (June 2000)

READING STAGE	COMPREHENSION LEVEL			TOTAL N
	None/Minimal ⁷ (PA Score=0,1)	Partial (PA Score=2)	Essential (PA Score=3)	
Emergent ⁷	18	22	30	75
Early Fluent	29	42	54 ⁸	125
Fluent	56	71	81	692
TOTAL N	266	475	151	892 students

Predictive Validity: Grade 3 Criterion Referenced Test-Reading

For the first time in August 2000, we were also able to explore the relationship between performance on ECAP in Grade 2 and performance on the MCPS *Criterion Referenced Test (CRT)-Reading* in Grade 3. MCPS uses the *Metropolitan Achievement Test (MAT-7)* for the multiple-choice portion of the Grade 3 CRT in reading. Consequently, this comparison provides an opportunity to explore achievement in Grade 3 on a nationally normed test that is aligned with the MCPS curriculum.⁹ We found that **student performance on ECAP-Reading in Grade 2 predicts performance on the Grade 3 CRT-Reading**

⁵ Only students reading at the early fluent stage with partial or essential comprehension and all students reading at the fluent stage during the Winter testing, scored at or above the MCPS mean percentile score on the CTBS, suggesting a reasonable mid-year goal for Grade 2 students.

⁶ MCPS typically reports *median* percentile scores.

⁷ Reading stages (emergent and early emergent) and comprehension levels (none and minimal) were combined to increase the number of students in these cells.

⁸ This mean should be interpreted with caution, since it is based on only 6 students.

⁹ Like the CTBS, the CRT requires students to read short passages and respond to multiple-choice questions about those passages—again different performance requirements than ECAP—but at least aligned with MCPS curriculum outcomes (global understanding, developing interpretation, personal and critical response).

(multiple-choice). Among 431 RI Study sample students who took ECAP in June 1999, those students meeting the Reading Initiative goal (reading at the fluent stage with partial or essential comprehension) by the end of second grade, had a mean CRT percentile score of 74 in June 2000 (vs. 50 for those not meeting this goal). This finding also held when we looked at:

- ECAP results from Winter 1999 testing; and
- Assessment results for each group of students studied: students from each racial-ethnic group; and students who had ever received ESOL, special education, or free and reduced-price meal (FARMS) services.

The results for the Grade 3 CRT-Reading presented in Exhibit 3 also show that among each demographic subgroup studied, those students who met the Reading Initiative goal by the end of second grade had a mean CRT-Reading percentile score greater than the MCPS mean of 66. In fact, all means were at or above the 70th percentile nationally.

Exhibit 3
Mean Grade 3 CRT-Reading Percentile Score¹⁰ for
 Grade 2 Students Making and Not Making the Reading Initiative Goal
 By the End of Second Grade

STUDENT GROUPS	N	Mean for Students Who Met RI Goal by June 1999	Mean for Students Who Did Not Meet RI Goal by June 1999
All Students	431	74	50
RACE/ETHNICITY			
Asian American	48	75	53
African American	109	70	45
White	162	78	59
Hispanic	111	70	46
ESOL SERVICES			
Never ESOL	351	75	53
Prior or Current ESOL	80	71	44
SPECIAL EDUCATION SERVICES			
Never Special Education	352	75	50
Prior or Current Special Ed	79	71	51
FARMS			
Never FARMS	230	77	57
Prior or Current FARMS	201	70	46

Exhibit 4 presents mean CRT percentile scores for students at different reading stages and comprehension levels. While not as clear as the CTBS data, the CRT data still suggest a strong relationship between ECAP in Grade 2 and CRT

¹⁰ The **mean** percentile score for Grade 3 CRT-Reading was 66 system-wide and 63 for all Reading Initiative Study sample students tested in Spring 2000. MCPS typically reports **median** percentile scores.

in Grade 3. And as with the CTBS, we also found that **only those students reading at the fluent stage with comprehension at the partial or essential level at the end of second grade scored above the MCPS mean percentile score of 66 on the Grade 3 CRT in Reading.** This finding provides additional evidence that the Reading Initiative end-of-second-grade goal makes sense in predicting above-MCPS average performance on the Grade 3 Reading CRT, but at the same time is a rigorous standard, when compared to national performance norms.¹¹

Exhibit 4
Mean Grade 3 CRT-Reading Percentile Scores¹²
 For Grade 2 Students at Different Reading Stages and Comprehension Levels
 At the End of Second Grade

READING STAGE	COMPREHENSION LEVEL			TOTAL N
	None/Minimal ¹³ (PA Score=0,1)	Partial (PA Score=2)	Essential (PA Score=3)	
Emergent ¹³	33	44	43	60
Early Fluent	44	57	44 ¹⁴	63
Fluent	56	72	79	308
TOTAL N	124	210	97	431 students

Additional Grade 3 Assessments

Also of interest is whether student performance on ECAP-Reading in Grade 2 predicts performance on the Grade 3 content open-ended portion of the CRT-Reading and on the Grade 3 MSPAP-Reading. One of the driving forces behind ECAP is to better support and prepare students for the kinds of reading and writing tasks on the Grade 3 MSPAP—that is, “to scaffold to success.” Consequently, teachers and administrators would like to see a strong relationship between student performance on ECAP and Grade 3 MSPAP-Reading, and the Grade 3 CRT (content open-ended) which is similar in its performance demands to MSPAP. We will report findings from both of these tests when the MSPAP results are available in December.

Reliability of ECAP

In addition to exploring the concurrent and predictive validity of ECAP, we need to know whether it is a **reliable** measure—that is, **does it produce consistent**

¹¹ Only students reading at the early fluent stage with partial or essential comprehension and all students reading at the fluent stage during the Winter testing, scored at or above the MCPS mean percentile score on the Grade 3 CRT. This finding supports the same mid-year goal for Grade 2 students as the CTBS results.

¹² MCPS typically reports **median** percentile scores.

¹³ Reading stages (emergent and early emergent) and comprehension levels (none and minimal) were combined to increase the number of students in these cells.

¹⁴ This mean should be interpreted with caution, since it is based on only 2 students.

results when administered and scored by different teachers and in different schools? Whether ECAP is used to inform instruction or as an accountability measure, those who use it need to know that it would produce the same student results regardless of which school or teacher administered and scored the assessment. To explore the reliability of ECAP, we examined the scoring of the running records and the written constructed response items (performance assessments) separately.

Running Records (Measure of Oral Reading Fluency)

Can running records be scored consistently by different teachers in different schools? To answer his question, we tape-recorded all running records administered as part of the RI Study in 1999 and 2000. For each administration, trained teachers scored a one-third random sample of running records from the tapes.¹⁵ **We found that across two years and four administrations, teachers’ agreement on running record scoring ranged from 95 to 98 percent.**

In each reliability sample, each running record was scored by two different teachers: (1) the school-based teacher who took the running record with the student, and (2) another teacher from a different school who received the same training and scored the running record from a tape. We found agreement on the scoring decisions made (whether the student had read the book with 90 percent or better oral accuracy and should take the performance assessment for that book) for almost all of the sampled running records (95 to 98 percent). These reliability data, which are presented in Exhibit 5, suggest that with proper training, running records can be scored consistently by different teachers in different schools.

Exhibit 5
Running Record Reliability (Percent Agreement)
For 1999 and 2000 Reading Initiative Study Samples

RELIABILITY SAMPLE	# OF STUDENTS	PERCENT AGREEMENT
<i>Winter 1999</i>	180	95%
<i>Spring 1999</i>	177	96%
<i>Winter 2000</i>	310	98%
<i>Spring 2000</i>	301	97%

Performance Assessments (Measure of Comprehension)

Each performance assessment was scored holistically by trained teachers, based on whether the student response demonstrated comprehension of what

¹⁵ In order to ensure that running records were administered and scored as consistently as possible, the RI Study supplemented the running record training that teachers had already received through the Reading Initiative (Summer 1998 and 1999) and ECAP (school year 1999-2000).

was read, rather than writing skills. Specifically, assessments were scored on a four-point scale as demonstrating either:

- 3 = **essential** understanding,
- 2 = **partial** understanding,
- 1 = **minimal** understanding, or
- 0 = **no** understanding of the story/text.

In exploring the reliability of scoring the performance assessments, we considered two questions:

- **Workshop Scoring:** Can performance assessments be scored consistently by different teachers from different schools? That is, can this kind of scoring be done well in a scoring workshop where text-specific training is provided?
- **School-Based Scoring:** Is the scoring of performance assessments by the schools consistent with the scoring done by experts outside the school? That is, do teachers scoring their own school’s papers agree with “expert” scoring done outside the school?

A two-year review of scoring data for the Grade 3 CRT-Reading (content open-ended) suggests that a reasonable standard for scoring this type of assessment is that teachers agree exactly on the scoring of 65 to 75 percent of the papers and are within one point on the remaining papers.

Workshop Scoring. Two different trained teachers outside the school scored the performance assessments administered as part of the RI Study in 1999 and 2000. **Over two years and four administrations, we found that teachers were within 1 point on a 4-point rubric in scoring virtually all papers (ranging from 99 to almost 100 percent of the papers scored). Across all teachers and books scored, teachers agreed exactly on the scoring of approximately two-thirds of the papers** (see Exhibit 6). However, the extent to which teachers agreed in their scoring varied considerably by individual teacher and by the book scored. This variability will be discussed further in a technical report on ECAP.

Exhibit 6
Performance Assessment Scoring Reliability (Percent Agreement)
For 1999 and 2000 Papers Scored in **Workshops**

Reliability Sample	Exact Agreement	Within 1 Point
Winter 1999 (439 papers)	74%	99%
Spring 1999 (490 papers)	66%	99%
Winter 2000 (518 papers)	67%	>99%
Spring 2000 (704 papers)	67%	>99%

School-Based Scoring. During Winter and Spring 2000, performance assessments administered in the 17 Phase 1 RI Study sample schools were scored by ECAP-trained teachers in those schools and by at least one trained

teacher outside the school. **We found that school-based scoring is not always as reliable as the scoring done outside schools by “expert” scorers.** For both Winter and Spring 2000, teachers scoring papers outside their school (workshop scoring) agreed on the scoring of 67 percent of the papers. While **school-based scoring** agreed with the workshop scoring for 71 percent of the Winter 2000 papers, it **fell to only 60 percent for the Spring 2000 papers** (see Exhibit 7).

Exhibit 7
Performance Assessment Scoring Reliability (Percent Agreement)
For Winter and Spring 2000 Papers
School-Based Scoring vs. Workshop Scoring

Reliability Sample	N of Papers	Exact Agreement ¹⁶	Within 1 Point
Winter 2000			
School-based Scoring	467	71%	98%
Workshop Scoring	518	67%	>99%
Spring 2000			
School-based Scoring	464	60%	99%
Workshop Scoring	704	67%	>99%

Of greater concern is the fact that schools varied considerably in the consistency of their scoring (see Exhibit B in the Appendix). School-based scoring reliability across the 17 Phase 1 schools ranged from 50 percent to 87 percent exact agreement for the Winter papers and from 28 percent to 90 percent exact agreement for the Spring papers. **School-based scoring agreement with the external experts fell below 60 percent in three out of 17 schools in the Winter and seven out of 17 schools in the Spring.**¹⁷

Implications of Findings Regarding Measurement Properties of ECAP-Reading

Our findings regarding the measurement properties of ECAP suggest that it is a promising assessment tool for measuring reading performance in the early grades. We found that student performance on ECAP relates to student performance on nationally normed tests of Reading/Language Arts, given at the same time (Grade 2 CTBS) and one year later (Grade 3 CRT). Further, comparisons of student performance on ECAP with CTBS and CRT appear to validate as a reasonable but rigorous performance standard, the Reading

¹⁶ **For papers scored in workshops**, we calculated the percent agreement between two teachers who scored the paper independently; both teachers had to give the paper the same score to achieve “exact agreement.” **For papers scored in ECAP schools**, we calculated the percent agreement between the school-based score and either the workshop score (if paper was scored once in the workshop) or the average of the workshop scores (if the paper was scored by two teachers in the workshop). In order to apply a fair standard to the school-based scoring when compared to the **average** workshop score, the school-based score had to be within ½ point of the workshop score to achieve “exact agreement.”

¹⁷ We are not sure why school-based reliability was lower in the Spring than the Winter, but suspect that the difference might be due at least in part to the fact that teachers had less time to score the Spring papers because it was the end of the school year.

Initiative goal that students read at the fluent stage with partial or essential written comprehension by the end of second grade. That is, students meeting the Reading Initiative goal, a goal which curriculum administrators tell us reflects what we want students to know and be able to do at the end of second grade, are the only students performing above MCPS averages on the CTBS and the CRT. This finding is consistent with MCPS efforts to "raise the bar" as part of its *Call to Action*.

In addition, we have shown that ECAP can be a reliable measure. With thorough training, running records can be scored consistently by different teachers in different schools. With proper training and quality scoring materials, performance assessments can be scored reliably, especially by teachers trained in scoring workshops. The reliability of school-based scoring, however, varied considerably from school to school, suggesting caution in using school-based scoring results, especially for accountability purposes. Thus, staff training and monitoring to achieve adequate reliability is likely needed as ECAP use is expanded.

These findings are specific to the books that were used for Grade 2 ECAP during the last two years. ECAP is now expanding to assess students in Kindergarten and Grade 1 and adding texts at each grade and stage, including expository as well as narrative texts. Our experience with the Grade 2 ECAP materials suggests that these assessments require thorough teacher training and quality scoring materials to achieve scoring reliability. In order to verify the validity and reliability of these new assessment materials, we must continue to monitor their relationship to student performance on other measures. And our assessment results suggest that in order to ensure the reliability of school-based performance assessment scoring, sample papers from each school should be randomly selected for outside expert scoring.

Student Outcomes in Reading

To understand student outcomes in relation to the Reading Initiative, we explored two questions:

- ***How well are Grade 2 students performing in reading?***
- ***Has Grade 2 reading performance improved since the Reading Initiative was first implemented?***

Status of Grade 2 Reading Performance

The original goal of the Reading Initiative was that students be fluent and independent (on grade-level) readers by the end of the second grade. Thus, in 1999 we reported the percentage of students reading at the fluent stage at the end of second grade. Through the 1999-2000 implementation of ECAP in 54

Phase 1 schools, this goal has been further refined: ***students should be reading at the fluent stage (with at least 90 percent accuracy) and demonstrating written comprehension at the partial or essential level by the end of Grade 2.*** Our study of the measurement properties of ECAP has validated this goal as a rigorous but reasonable standard, based on student performance on the nationally-normed Grade 2 CTBS (Reading and Language) and the Grade 3 MCPS CRT-Reading (multiple choice). Consequently, this report focuses on ***two indicators of student reading performance at the end of second grade:*** the percentage of students ***reading at the fluent stage***, and the percentage of students ***meeting the Reading Initiative goal***, which incorporates both reading stage and written comprehension.

To assess the status of Grade 2 reading performance during the 1999-2000 school year, the RI Study administered ECAP to a sample of 899 Grade 2 students in 17 Phase 1 and 18 Phase 2 schools in the Winter (January-February) and Spring (May-June), 2000. Sample schools were selected to be demographically representative of the Phase 1 and Phase 2 schools, respectively. Within each school, we randomly selected one-third of the students in each Reading Initiative class for assessment to ensure that the students tested represented all Reading Initiative classes in each school.

Across the 35 schools in the RI sample, ***we found considerable evidence of student progress in reading during Grade 2 from Winter to Spring 2000. However, we also found that about one-half of our students did not meet the rigorous Reading Initiative goal of reading at the fluent stage with partial or essential comprehension by the end of Grade 2.*** Specifically, we found that:

- 79 percent of students improved in their reading performance from Winter to Spring 2000 (or had already reached fluency with partial or essential comprehension at the Winter testing).
- 77 percent of students were reading at the fluent stage at the end of Grade 2 (vs. 56 percent in Winter).
- Only 55 percent of students met the rigorous Reading Initiative goal of reading at the fluent stage with written comprehension at the essential or partial levels by the end of Grade 2 (vs. 41 percent in Winter).

We also found considerable variation across schools in student performance:

- ***Overall, Phase 2 schools performed better on these assessments than did Phase 1 schools.*** A higher percentage of students in Phase 2 schools were reading at the fluent stage (83) and meeting the Reading Initiative goal (65) at the end of Grade 2 than was true for the Phase 1 schools (71 percent fluent and 47 percent meeting the goal)—see Exhibit 8. Note that although

the Reading Initiative was introduced a year earlier in the Phase 1 schools, these schools also have higher proportions of at-risk students, in particular students who have received free and reduced-price meal services (FARMS).

Exhibit 8
 Status of Students Regarding Reading Initiative Outcomes
 At End of Grade 2 (June 2000)
 For Phase 1 and 2 Schools

Phase	N of Schools	N of Students	% Reading at Fluent Stage	% Meeting RI Goal
Phase 1	17	465	71%	47%
Phase 2	18	444	83%	65%

- ***There was considerable variation across individual schools in student performance at the end of Grade 2.*** The proportion of students reading at the fluent stage in June ranged from 38 to 86 percent in Phase 1 schools and from 65 to 100 percent in Phase 2 schools. Similarly, the proportion of students meeting the Reading Initiative goal in June ranged from 14 to 67 percent in Phase 1 schools and from 25 to 83 percent in Phase 2 schools. This variation among both the Phase 1 and Phase 2 schools in our sample (illustrated in Exhibits C and D in the Appendix) suggests that we have some schools reaching or approaching the Reading Initiative goal. Still, we have other schools that appear to need additional support in implementing the Reading Initiative.

As reported during 1998-99, we again found in 1999-2000 that students from some demographic groups performed better on the ECAP assessments than students from other groups. On our two primary indicators (reading at the fluent stage and meeting the Reading Initiative goal), we found that:

- Students who had ever received ESOL services, special education services or free and reduced-price meal services (FARMS), did not perform as well as their peers who had not received these services.
- A higher percentage of White and Asian American students were reading at the fluent stage and meeting the Reading Initiative goal at the end of second grade than African American and Hispanic students—the same racial/ethnic group differences as we reported last year. With one exception (Hispanic students meeting the Reading Initiative goal in Winter 2000 in Phase 2 schools), these demographic findings held for both the Phase 1 and Phase 2 schools (see Exhibits 9 and 10).

Exhibit 9¹⁸
 Percentage of Students at Fluent Stage and Meeting Reading Initiative Goal in
 Winter (January) and June 2000
17 Phase 1 Schools

STUDENT GROUP	N	% STUDENTS AT FLUENT STAGE		% STUDENTS MEETING RI GOAL	
		Winter 2000	June 2000	Winter 2000	June 2000
All Students	458	49%	71%	37%	47%
RACE/ETHNICITY					
Asian American	64	66%	77%	48%	47%
African American	140	48%	71%	33%	45%
White	153	58%	80%	51%	58%
Hispanic	100	26%	55%	13%	33%
ESOL SERVICES					
Never ESOL	384	54%	75%	42%	51%
Ever ESOL	74	26%	51%	8%	27%
SPECIAL EDUCATION SERVICES					
Never Special Ed	384	54%	76%	41%	51%
Ever Special Ed	74	24%	47%	15%	28%
FARMS					
Never FARMS	232	60%	81%	50%	55%
Ever FARMS	226	38%	62%	24%	39%

Exhibit 10¹⁸
 Percentage of Students at Fluent Stage and Meeting Reading Initiative Goal
 Winter (February) and June 2000
18 Phase 2 Schools

STUDENT GROUP	N ¹⁹	% STUDENTS AT FLUENT STAGE		% STUDENTS MEETING RI GOAL	
		Winter 2000	June 2000	Winter 2000	June 2000
All Students	441	64%	83%	48%	65%
RACE/ETHNICITY					
Asian American	53	74%	91%	59%	74%
African American	44	48%	75%	30%	52%
White	318	65%	85%	48%	67%
Hispanic	26	54%	65%	50%	50%
ESOL SERVICES					
Never ESOL	410	66%	86%	49%	67%
Ever ESOL	31	36%	52%	29%	42%
SPECIAL EDUCATION SERVICES					
Never Special Ed	377	68%	88%	52%	69%
Ever Special Ed	64	39%	56%	25%	44%
FARMS					
Never FARMS	381	66%	87%	50%	69%
Ever FARMS	60	48%	63%	30%	43%

¹⁸ In interpreting these data, we have focused on *patterns repeated* for both reading at the fluent stage and meeting the Reading Initiative goal and *larger increases or differences* of more than 3 percentage points.

¹⁹ Given the smaller Ns for some of the demographic subgroups in the Phase 2 schools, these demographic findings should be interpreted cautiously.

- Student performance improved from Winter to June for all demographic subgroups, generally for both indicators²⁰, with at-risk students (those receiving ESOL, special education and free and reduced-price meal services, African-American and Hispanic students) in Phase 1 schools making the greatest gains. This finding has implications for closing the performance gap between White and Asian students and their African American and Hispanic peers.

Comparison to ECAP Findings in 54 Phase 1 Schools

During 1999-2000, ECAP was implemented in Grade 2 for all 54 Phase 1 schools, with schools testing their own students and scoring their own performance assessments. All second grade students were to be assessed by their Reading Initiative teacher in Winter (January) and Spring (May-June); some students were also tested in the Fall. The performance assessments were scored by at least one teacher in each school, based on training provided by ECAP, and these scores were supposed to be entered by school staff into a system-wide database. The RI Study tested a random one-third sample of students in a demographically representative sample of 17 Phase 1 schools and scored the performance assessments at least one more time at a scoring workshop.²¹ Consequently, we were able to explore the question: ***are the student results obtained from the system-level implementation of ECAP comparable to the results obtained in a more tightly controlled sample of schools?***

We found that the distribution of students reading at the four book stages and comprehending at the four levels was generally very similar, whether we looked at:

- Reading data in the ECAP database across all 54 Phase 1 schools;
- Reading data in the ECAP database for all students in the 17 RI Study sample schools; or
- Specifically the one-third sample data collected by the RI Study in these same 17 schools.

Looking more closely at only those schools for which we had both ECAP and RI Study data, we found the biggest differences in the Spring 2000 performance assessment scoring. Teachers who provided the school-based scores in the ECAP database gave more 3s for essential comprehension (17 vs. 10 percent)

²⁰ The only exceptions were among some student groups who essentially showed no change in the percentage of students meeting the Reading Initiative goal from Winter to Spring 2000—Asian American students in Phase 1 schools and Hispanic students in Phase 2 schools.

²¹ Teachers trained by the RI Study administered the running records and performance assessments to the sample students.

and fewer 1s for minimal comprehension (31 vs. 37 percent) than teachers scoring for the RI Study. We found these scoring differences in seven out of the 12 schools that had both ECAP and RI Study data. We also noted that the ECAP database was incomplete for some schools:

- Approximately 20 to 25 percent of the students enrolled in the 54 Phase 1 schools during 1999-2000 did not have reading results in the ECAP database.
- Out of the 54 Phase 1 schools, 5 schools in Winter 2000 and 8 schools in Spring 2000 did not have any reading results in the ECAP database.
- In addition, some schools did not appear to have ECAP reading results for all second grade students. For the Winter testing, 7 out of 54 schools had data for less than 75 percent of the students enrolled; for the Spring testing, the same was true for 9 out of 54 schools.
- Out of our 17 RI Study sample schools, 4 schools did not have reading results in the ECAP database for Winter 2000; 5 schools did not have reading results for Spring 2000.
- In reviewing the data missing from the ECAP database for individual schools and students, we found that most of the missing data can be attributed to schools who did not enter any reading data in the ECAP database, rather than schools who may not have included all of their ESOL and special education students in the ECAP assessments.

These findings from the ECAP database have two implications. First, the data missing from the ECAP database suggest that more work needs to be done in fully implementing ECAP so that schools are testing all students and entering their data. Second, the possible bias in performance assessment scoring among some of the 54 schools as well as missing ECAP data suggest caution in using the ECAP database to make conclusions about the status of Grade 2 reading performance across all Phase 1 schools, and specifically for some individual schools.

1999 vs. 2000 Student Reading Initiative Performance

Since the Reading Initiative was first introduced in the Phase 1 schools in 1998-99, we were able to explore student reading performance one and two years after its introduction in two ways²²:

²² Both analyses involve comparing the performance of cohorts—that is, two different groups of students moving through the second grade in their respective schools in two different years. Consequently, it is difficult to attribute progress (or the lack thereof) strictly to program because each cohort of students moving through a school can be somewhat different demographically.

- Through ECAP assessments administered to Grade 2 students by the RI Study in Winter and Spring, 1999 and 2000; and
- Through Spring 2000 Grade 3 CRT-Reading scores for those students who had had one year of Reading Initiative experience, compared to students in these same schools prior to implementation of the Reading Initiative (Spring 1998 and 1999).

1999 vs. 2000 ECAP-Reading

Has student performance in reading as measured by the Grade 2 ECAP improved from 1998-99 to 1999-2000 in the Phase 1 schools? To answer this question, the RI Study administered ECAP assessments to the following random samples:

- 478 Grade 2 students in 17 Phase 1 schools during 1998-99, and
- 465 Grade 2 students in 17 Phase 1 schools during 1999-2000 (six of the schools were in both the 1998-99 and 1999-2000 samples).

Based on the comparison between the two samples of 17 schools, ***we found some improvement in oral reading fluency but not in comprehension from June 1999 to June 2000.*** Specifically, across the 17 Phase 1 schools sampled in 1998-99 and the 17 Phase 1 schools sampled in 1999-2000 (see Exhibit 11), we found that:

- The proportion of the students reading at the fluent stage at the end of Grade 2 increased slightly from 69 percent in 1999 to 71 percent in 2000.
- The proportion of students meeting the Reading Initiative goal at the end of Grade 2 (which includes comprehension) decreased slightly from 50 percent in 1999 to 47 percent in 2000.

When we looked at the more appropriate, but considerably smaller, comparison sample—the six overlapping schools that participated in the assessments both years (see Exhibit 11)—we found that:

- The proportion of the students reading at the fluent stage at the end of Grade 2 increased (but not significantly) from 68 percent in 1999 to 75 percent in 2000.
- The proportion of students meeting the Reading Initiative goal (which includes comprehension) was the essentially same for both years (47 percent).
- There was no consistent pattern in 1999 vs. 2000 student performance among these six schools. In three of the schools, there were increases in the

percentage of students reading at the fluent stage and meeting the Reading Initiative goal from June 1999 to June 2000; in the other three schools there were decreases of a similar magnitude (see Exhibits E and F in the Appendix). Again, this finding highlights the variation from school to school in student performance outcomes.

Exhibit 11
Status of Students Regarding Reading Initiative Outcomes At End of Grade 2
By Sample and Cohort

Sample and Cohort	N of Students	% Reading at Fluent Stage	% Meeting RI Goal
Different Samples of 17 Schools			
1998-1999	478	69%	50%
1999-2000	465	71%	47%
Overlapping Samples of 6 Schools			
1998-1999	176	68%	47%
1999-2000	161	75%	47%

We also explored whether these outcomes varied for different groups of students. Although we found some evidence that the reading performance of students from certain at-risk groups has improved from 1999 to 2000, **these promising results should be reviewed with considerable caution**. We did not test students in the same 17 schools both years, and the two samples of 17 schools are not the same demographically.²³ We did explore, however, the performance of different subgroups of students across the 17 schools studied in 1999 and the 17 schools studied in 2000 to see if any trends emerged. The data presented in Exhibit 12 suggest increases in the proportion of students reading at the fluent stage and meeting the Reading Initiative goal from June 1999 to June 2000 among some of our higher-risk populations—African American students and students who have ever received special education, ESOL, or free and reduced-price meal (FARMS) services. Again, this finding has possible implications for “closing the gap.” However, there was also a decrease in the percentage of Asian American students from these two different samples reading at the fluent stage and meeting the Reading Initiative goal over this same time period.

1999 vs. 2000 CRT-Reading

Has student performance in reading as measured by the Grade 3 CRT-Reading (MAT-7 multiple choice) improved from 1998-99 to 1999-2000 in the Phase 1 schools? To answer this question, we compared the Spring 2000

²³ The 17 schools participating in the Reading Initiative Study assessments during 1998-99 were selected based on their previous experience (or lack of experience) in implementing aspects of reading instruction similar to the Reading Initiative. For the 1999-2000 sample, we decided that it was more important to select schools that represented the demographic diversity among the 54 Phase 1 schools.

Exhibit 12²⁴
 Percentage of Grade 2 Students
 Reading at the Fluent Stage and Meeting the Reading Initiative Goal
 In June 1999 and June 2000

STUDENT GROUP	JUNE 1999 N	JUNE 2000 N	% STUDENTS AT FLUENT STAGE		% STUDENTS MEETING RI GOAL	
			June 1999	June 2000	June 1999	June 2000
All Students	478	458	69%	71%	50%	47%
RACE/ETHNICITY						
Asian American	54	64	87%	77%	72%	47%
African American	119	140	68%	71%	41%	45%
White	178	153	78%	80%	61%	58%
Hispanic	126	100	51%	55%	33%	33%
ESOL SERVICES						
Never ESOL	388	384	75%	75%	57%	51%
Ever ESOL	90	74	43%	51%	21%	27%
SPECIAL EDUCATION SERVICES						
Never Special Ed	408	384	74%	76%	55%	51%
Ever Special Ed	70	74	41%	47%	21%	28%
FARMS						
Never FARMS	252	232	83%	81%	63%	55%
Ever FARMS	226	226	54%	62%	35%	39%

CRT-Reading results for students enrolled in Phase 1 schools during 1998-99, to Spring 1999 and Spring 1998 results for students in those same 50 Phase 1 schools.²⁵ We found ***no evidence of overall change in Grade 3 CRT-Reading scores from the years prior to the Reading Initiative to Spring 2000 when students in the Phase 1 schools had had one year of Grade 2 Reading Initiative experience during 1998-99.*** The total mean percentile scores for students in these Phase 1 schools were 62, 61 and 61 for Spring 1998, Spring 1999, and Spring 2000, respectively. There was some variation by school across this three-year period in the Grade 3 CRT-Reading scores, with 17 of the 50 schools showing an increase of three or more percentile points from Spring 1999 to Spring 2000. But most of these schools had previously experienced a drop of three or more percentile points from Spring 1998 to Spring 1999, suggesting considerable variation from year to year, independent of the Reading Initiative. The results for the 50 Phase 1 schools are presented in Exhibit G in the Appendix.

We also found no evidence of improvement in Grade 3 CRT Reading scores across each demographic subgroup of students in these 50 Phase 1 schools. These results, which are presented in Exhibit 13, indicate essentially

²⁴ In interpreting these data, we have focused on *patterns repeated* for both reading at the fluent stage and meeting the Reading Initiative goal and *larger increases or differences* of more than 3 percentage points.

²⁵ Four of the 54 Phase 1 schools are primary K-2 elementary schools and thus do not have Grade 3 CRT results for 1998 and 1999.

Exhibit 13
Mean Percentile Scores on the *Grade 3 Reading CRT*
 Before (1998 and 1999) and After (2000) Introduction of the Reading Initiative
 In 50 Phase 1 Schools²⁶

STUDENT GROUPS	MEAN-SPRING 1998 (n=3439)	MEAN-SPRING 1999 (n=3491)	MEAN-SPRING 2000 ²⁷ (n=3932)
All Students	62	61	61
RACE/ETHNICITY			
Asian American	66	68	68
African American	53	53	53
White	71	69	71
Hispanic	55	54	53
ESOL SERVICES			
Never ESOL	64	62	63
Ever ESOL	54	53	52
SPECIAL EDUCATION SERVICES			
Never special ed	65	63	63
Ever special ed	51	53	51
FARMS			
Never FARMS	70	69	70
Ever FARMS	53	53	52

the same mean percentile for Grade 3 CRT-Reading scores in Spring 1998, Spring 1999 and Spring 2000 for each demographic subgroup.

Additional 1999 vs. 2000 Comparisons

Also of interest are the results of the Grade 3 CRT-Reading (content open-ended) and the Grade 3 MSPAP-Reading, because these assessments are more closely aligned with the purposes of the Reading Initiative. We will examine these results to see if they indicate any changes since the introduction of the Reading Initiative, in an addendum to this report in December 2000.

Implications of Findings Regarding Student Outcomes

Students from all demographic groups have shown growth in their reading performance each year of the Reading Initiative from Winter to Spring testing. Some of the greatest gains have come among our at-risk students, those receiving ESOL, special education and free and reduced-price meal services, as well as African American and Hispanic students, especially in our Phase 1 schools. And we have some evidence that increasing numbers of students from these same groups are reading at the fluent stage with partial or essential comprehension by the end of second grade. These findings are promising and

²⁶ These analyses only include those students enrolled in MCPS for at least two years who received standard administration of the CRT.

²⁷ This is the mean for all students who took the Spring 2000 test who were enrolled in any Phase 1 school from November 1998 through June 1999.

have implications for closing the achievement gap between our White and Asian students and their African American and Hispanic peers.

On the other hand, there has not been any significant improvement overall in the percentage of students who are reading at the fluent stage by the end of second grade since the introduction of the Reading Initiative in 1998-99. Nor does a three-year analysis of the Grade 3 Reading CRT scores suggest any improvement in student reading performance, overall or among various demographic groups. Finally, the assessment results from both last year's and this year's studies suggest that roughly one-half of our students have not met our rigorous Reading Initiative goal of reading at the fluent stage with partial or essential written comprehension by the end of second grade. This is discouraging news.

Yet, we must remember that the components of the Reading Initiative are based on sound research evidence and proven instructional practices in reading. Teachers and principals are generally enthusiastic about its components, especially the reduced class size for reading instruction and the emphasis on periodic assessment of student progress. Both last year's Reading Initiative Study report and this year's formative implementation study suggest that the issue is not whether the Reading Initiative is a quality program, but rather whether it is being fully implemented in all schools. This interpretation is supported by the tremendous variation found among schools in student performance on fluency and comprehension. We should also note that many of our conclusions regarding the status of Grade 2 student reading performance are based on a relatively rigorous standard, reading at the fluent stage with partial or essential written comprehension, when compared to national norms. And finally, we must also keep in mind that it may be too soon to see improvements from year to year until students have experienced the full Reading Initiative program that starts in Kindergarten. In Spring 2001, we have an opportunity to look at Grade 2 ECAP outcomes for students who have had three years of Reading Initiative experience (Grades Kindergarten through 2), and Grade 3 CRT and MSPAP outcomes for students with two years of Reading Initiative experience.

Overall Implications and Recommendations

The assessment findings reported here have several implications that lead to the following recommendations:

- First, ***these data support the continuation of the Early Childhood Assessment Program (ECAP) as a measure of student reading performance in Grade 2, for the purpose of monitoring student progress and providing instructional feedback to teachers.*** Analyses comparing results from ECAP to the Grade 2 CTBS and the Grade 3 CRT suggest that ECAP is a ***valid*** measure. Data from two years of ECAP administration and

scoring suggest that it can be a **reliable** measure. Additional data from the Spring 2000 administration of the Grade 3 MSPAP-Reading and the content open-ended portion of the Grade 3 CRT-Reading will hopefully tell us whether ECAP can help Kindergarten through Grade 2 teachers “scaffold for success” on Grade 3 measures like MSPAP.

- Second, **MCPS should proceed with considerable caution regarding the use of Grade 2 ECAP-Reading as a school-level accountability measure.** While we have demonstrated that ECAP can be scored consistently across teachers and schools, we found considerable variation in the reliability of school-based scoring of performance assessments, especially in some schools. Schools should continue scoring their own papers in order to benefit from the instructional feedback that scoring can provide. **But we must reinforce teacher training and monitor teacher use of ECAP.** And specifically, we should monitor the reliability of school-based scoring, using “expert” scorers outside the school to score a randomly selected sample of papers from each school. Moreover, the data missing from the system-wide ECAP database suggest that **more attention must be given to the implementation issues in capturing ECAP data for future use.** Finally, we must consider the implications of using ECAP as an accountability measure when such use will likely change how teachers view the results and what they choose to emphasize in their instruction.
- Third, the results reported here are based on the Grade 2 ECAP assessment materials that were used over the last two years. ECAP is being expanded during 2000-2001 to incorporate new books in Grade 2 and to include Pre-kindergarten through Grade 1. **We should continue to study the measurement properties of ECAP, especially in new grade levels and with new texts and performance assessments.** This is especially important, given the need to evaluate new initiatives in literacy and early success.
- Although there continues to be evidence of student progress during second grade (from Winter to Spring) in all schools, a considerable number of students failed to reach the Reading Initiative goal by the end of Grade 2—a goal that we have shown to be relatively rigorous by national standards. While 77 percent of students were reading at the fluent stage by June of second grade, almost half of the students did not demonstrate partial or essential comprehension at the fluent stage. And students from at-risk demographic groups (ESOL, special education, FARMS, African Americans, and Hispanics) continue to perform less well than their not at-risk peers. Finally, while there was tremendous variation across schools, students in the Phase 1 schools, who were in their second year of the program, performed less well than students in the Phase 2 schools. These findings suggest two things. First, **we must examine why some schools are making progress and reaching our reading performance goals, while other schools are not.**

Secondly, ***we must continue to support and monitor the implementation of the Reading Initiative, particularly in Phase 1 schools—where many students in some schools continue to perform poorly.*** This is especially important if these students are to make full advantage of the Reading to Learn Initiative in Grade 3.

- Finally, we found some evidence of enhanced student progress in reading among our highest risk students (those who have received ESOL, special education or free and reduced-price meal services, as well as African American and Hispanic students). This finding suggests that ***the Reading Initiative may hold particular promise for “closing the gap.”*** At the same time, this year's data contain limited evidence of overall improvement in student reading performance since the introduction of the Reading Initiative. Given that the program is based on proven instructional practices in reading, data from last year's Reading Initiative Study and this year's formative case study of implementation suggest that the explanation may not lie in the quality of the program, but rather the unevenness of its implementation. ***At this point, it is time to refocus our efforts on the kinds of support and monitoring that schools need to successfully implement the Reading Initiative.***

Reading Initiative Study
Year 2 Assessment Report

APPENDICES

Exhibit A Major Study Questions and Findings

This table presents the major study questions and the corresponding findings.

Exhibit B Reliability of School-Based Performance Assessment

Schools varied considerably in the consistency of their scoring. School-based scoring agreement with the external experts fell below 60 percent in three out of 17 schools in the Winter and seven out of 17 schools in the Spring.

Exhibit C Percentage of Grade 2 Students Meeting Reading Initiative Goal in 17 Phase 1 Schools

Exhibit D Percentage of Grade 2 Students Meeting Reading Initiative Goal in 18 Phase 2 Schools

There was considerable variation across individual schools in student performance at the end of Grade 2.

Exhibit E Percentage of Grade 2 Students Reading at the Fluent Stage in Spring 1999 and Spring 2000 for Six Schools in the 1999 and 2000 Reading Initiative Study Samples

Exhibit F Percentage of Grade 2 Students Meeting the Reading Initiative Goal in Spring 1999 and Spring 2000 for Six Schools in the 1999 and 2000 Reading Initiative Study Samples

There was no consistent pattern in 1999 vs. 2000 student performance among the six schools.

Exhibit G Mean Percentile Scores Before and After Implementation of the Reading Initiative on Grade 3 CRT-Reading in Phase 1 Schools

We found no evidence of change in Grade 3 CRT scores from the years prior to the Reading Initiative to Spring 2000 when students in the Phase 1 schools had had one year of Grade 2 Reading Initiative experience during 1998-99.

Exhibit A
 Reading Initiative Study
 Year 2 Assessment Report
 Study Questions and Major Findings

STUDY QUESTION	MAJOR FINDING
<i>Measurement Properties of ECAP</i>	
1. Is ECAP a valid and reliable measure of Grade 2 student reading performance for all students?	
1.1 Does ECAP predict/relate to performance on other established measures of reading?	
1.1.1 How does student performance on Grade 2 ECAP-Reading relate to performance on the Grade 2 CTBS (reading and language subtests)?	<i>There is a clear relationship between student performance on ECAP (reading) and CTBS (reading and language) in Grade 2.</i> Among the 894 RI Study sample students, those students meeting the RI goal of reading at the fluent stage with partial or essential comprehension in June had a mean CTBS percentile score of 73 in March (vs. 44 for those not meeting this goal). The system-wide mean percentile score on the reading subtest was 59. Results for the CTBS language subtest were similar.
1.1.2 Does student performance on ECAP-reading in Grade 2 predict performance on the Grade 3 CRT-Reading (MAT-7 multiple choice)?	<i>Student performance on ECAP (reading) in Grade 2 predicts performance on the Grade 3 CRT (total reading).</i> Among 431 RI Study sample students, those students meeting the RI goal of reading at the fluent stage with partial or essential comprehension in June 1999 had a mean CRT percentile score of 74 in June 2000 (vs. 50 for those not meeting this goal). The system-wide mean percentile score on the reading CRT was 66.
1.1.3 Do these relationships hold for different groups of students?	<i>Yes, student performance on ECAP (reading) in Grade 2 is related to student performance on both the CTBS (reading and language) in Grade 2 and the CRT-total reading in Grade 3 for each of student groups studied:</i> <ul style="list-style-type: none"> • Students from each racial-ethnic group • Students who have ever received ESOL services • Student who have ever received special education services • Students who have ever received FARMS
1.2. Can the components of ECAP, running records and performance assessments, be scored consistently across different teachers and schools?	
1.2.1 Can running records be scored consistently by different teachers in different schools?	<i>Yes. Across 2 years and 4 administrations, teachers agreed on the scoring of 95-98% of the running records.</i> The school-based teacher who administered and scored the running record and another teacher from a different school who received the same training and scored the running record from a tape, agreed on the scoring decisions made for 95- 98% of the running records (whether the student had read the book with 90% or better oral accuracy and should take the performance assessment for that book).
1.2.2. Can performance assessments be scored consistently by different teachers in different schools?	<i>Yes. Over 2 years and 4 administrations, teachers were within 1 point on a 4-point rubric in scoring virtually all papers (99-100%).</i> Across all teachers and books scored, teachers agreed exactly on the scoring of approximately 2/3 of the papers. However, the extent to which teachers agreed in their scoring varied by individual teacher and by the book scored.
1.2.3 Is school-based scoring of performance assessments consistent with the scoring done by experts outside the school?	<i>Yes, but school-based scoring is not always as reliable as the scoring done outside schools by “expert” scorers.</i> For both Winter and Spring 2000, teachers scoring papers outside their school (workshop scoring) agreed on the scoring of 67 percent of the papers. <i>School-based scoring</i> agreed with the workshop scoring for 71 percent of the Winter 2000 papers, but <i>fell to only 60 percent for the Spring 2000 papers.</i> Of greater concern is the fact that schools varied considerably in the consistency of their scoring.

STUDY QUESTION	MAJOR FINDING
<p>1.3 Are the student results obtained from the system-level implementation of ECAP comparable to the results obtained in a more tightly controlled sample of schools?</p>	<p><i>The distribution of students reading at the 4 book stages and comprehending at the 4 levels was generally very similar</i>, whether we looked at:</p> <ul style="list-style-type: none"> • Reading data in the ECAP database across all 54 Phase 1 schools; • Reading data in the ECAP database for all students in the 17 RI Study sample schools; or • Specifically the one-third sample data collected by the RI Study in these same 17 schools. <p>The biggest differences were found in the Spring 2000 performance assessment scoring. <i>Teachers who provided the school-based scores in the ECAP database gave more 3s for essential comprehension (17 vs. 10 percent) and fewer 1s for minimal comprehension (31 vs. 37 percent) than teachers scoring for the RI Study.</i> We found these scoring differences in seven out of the 12 schools that had both ECAP and RI Study data. We also noted that the ECAP database was incomplete for some schools.</p>
<i>Student Outcomes in Reading</i>	
<p>2.1 How well are students performing in reading in Grade 2, as measured by ECAP?</p>	<p>Across the 35 RI sample schools (which demographically represent all MCPS elementary schools), <i>we found evidence of student progress in reading from Winter to Spring 2000. However, we also found that about ½ of our students did not meet the RI goal of reading at the fluent stage with partial or essential comprehension by the end of Grade 2.</i> Specifically, we found that:</p> <ul style="list-style-type: none"> • 79% of students improved in their reading performance from Winter to Spring 2000 (or had already reached fluency with partial or essential comprehension at the Winter testing) • 77% of students were reading at the fluent stage at the end of Grade 2 (vs. 56% in Winter) • Only 55% of students met the RI goal of reading at the fluent stage with comprehension at the essential or partial levels by the end of Grade 2 (vs. 41% in Winter).
<p>2.1.1 Do these outcomes vary for different schools?</p>	<p><i>Yes, overall, Phase 2 schools performed better on these assessments than did Phase 1 schools.</i> A higher percentage of students in Phase 2 vs. Phase 1 schools were reading at the fluent stage (83 vs. 71%) and meeting the RI goal (65 vs. 47%) at the end of Grade 2. <i>We also found considerable variation across individual schools in student performance at the end of Grade 2:</i></p> <ul style="list-style-type: none"> • The proportion of students reading at the fluent stage ranged from 38 to 86% in Phase 1 schools and from 65 to 100% in Phase 2 schools. • The proportion of students meeting the RI Goal in June ranged from 14 to 67% in Phase 1 schools and from 25 to 83% in Phase 2 schools.
<p>2.1.2 Do these outcomes vary for different groups of students?</p>	<p><i>Yes, again this year, we found that students from some demographic groups performed better on the ECAP assessments than students from other groups.</i> On our 2 primary indicators (reading at the fluent stage and meeting the RI goal) we found that:</p> <ul style="list-style-type: none"> • Students who had ever received ESOL services, special education services or free and reduced meal services (FARMS), did not perform as well as their peers who had not received these services. • A higher percentage of White and Asian American students were reading at the fluent stage and meeting the RI goal at the end of Grade 2 than African American and Hispanic students. With one exception (Hispanics, Phase 2 schools, Winter 2000, RI goal), these demographic findings held for both the Phase 1 and Phase 2 schools. • Student performance improved from Winter to June for all demographic subgroups, with at-risk students (those receiving ESOL, special education and free and reduced meal services, African-American and Hispanic students) in Phase 1 schools making the greatest gains.

STUDY QUESTION	MAJOR FINDING
2.2 Has student reading performance improved since the Reading Initiative was first implemented in 1998-99?	
2.2.1 Has student performance in reading as measured by the Grade 2 ECAP improved from 1998-99 to 1999-2000 in the Phase 1 schools?	<p><i>Yes, we found some growth in oral reading fluency but not necessarily in terms of comprehension.</i> Across the 17 Phase 1 schools sampled in 1998-99 and the 17 Phase 1 schools sampled in 1999-2000, we found that:</p> <ul style="list-style-type: none"> • The proportion of the students reading at the fluent stage at the end of Grade 2 increased slightly from 69% in 1999 to 71% in 2000. • The proportion of students meeting the RI Goal at the end of Grade 2 (which includes comprehension) decreased slightly from 50% in 1999 to 47% in 2000. <p>When we looked at a more appropriate comparison sample—the 6 overlapping schools that participated in the assessments both years—we found that:</p> <ul style="list-style-type: none"> • The proportion of the students reading at the fluent stage at the end of Grade 2 increased (but not significantly) from 68% in 1999 to 75% 2000. • The proportion of students meeting the RI Goal was the same for both years (47%). • In 3 of the 6 schools, there were increases in the percentage of students reading at the fluent stage and meeting the RI Goal from June 1999 to June 2000, but in the other 3 schools there were decreases of a similar magnitude.
2.2.2 Do these outcomes vary for different groups of students?	<p>To address this question, we looked at different subgroups of students across the 17 schools studied in 1999 and the 17 schools studied in 2000. Although these two samples of schools were not the same demographically, which makes the comparison less valid, the data suggest increases in the proportion of students reading at the fluent stage and meeting the RI goal from June 1999 to June 2000 among:</p> <ul style="list-style-type: none"> • Students who had ever received FARMS • Students who had ever received special education services • Students who had ever received ESOL services • African American students <p>However, there was a decrease in the percentage of Asian American students from these two different samples reading at the fluent stage and meeting the RI goal from June 1999 to June 2000.</p>
2.2.3 Has student performance in reading as measured by the Grade 3 CRT-Reading (multiple choice-MAT7) improved from 1998-99 to 1999-2000 in the Phase 1 schools?	<p><i>No, there is no evidence of overall change in Grade 3 Reading CRT scores from the years prior to the Reading Initiative to Spring 2000 when students in the Phase 1 schools had had one year of Grade 2 RI experience during 1998-99.</i> The total mean percentile scores for students in these Phase 1 schools were 62, 61 and 61 for Spring 1998, Spring 1999, and Spring 2000, respectively. There was considerable variation by school across this three-year period in Grade 3 CRT-Reading scores, which appears to be independent of the Reading Initiative.</p>
2.2.4 Do these outcomes vary for different groups of students?	<p><i>No, across each demographic subgroup of students, we found essentially the same mean percentile for Grade 3 Reading CRT scores in Spring 1998, Spring 1999 and Spring 2000.</i></p>

Exhibit B

Reliability of School-Based Performance Assessment Scoring by School

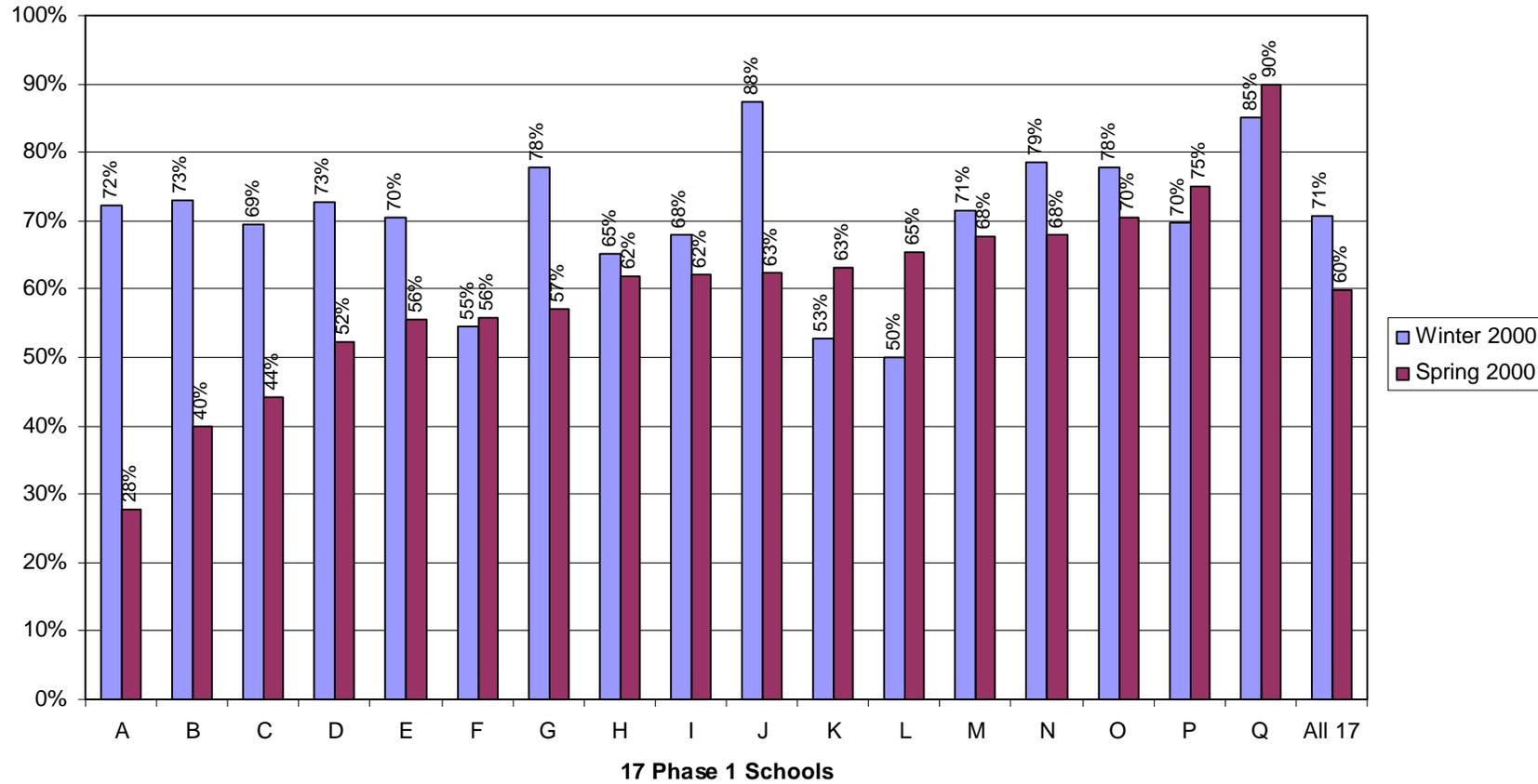


Exhibit C

Percentage of Grade 2 Students Meeting Reading Initiative Goal in 17 Phase 1 Schools

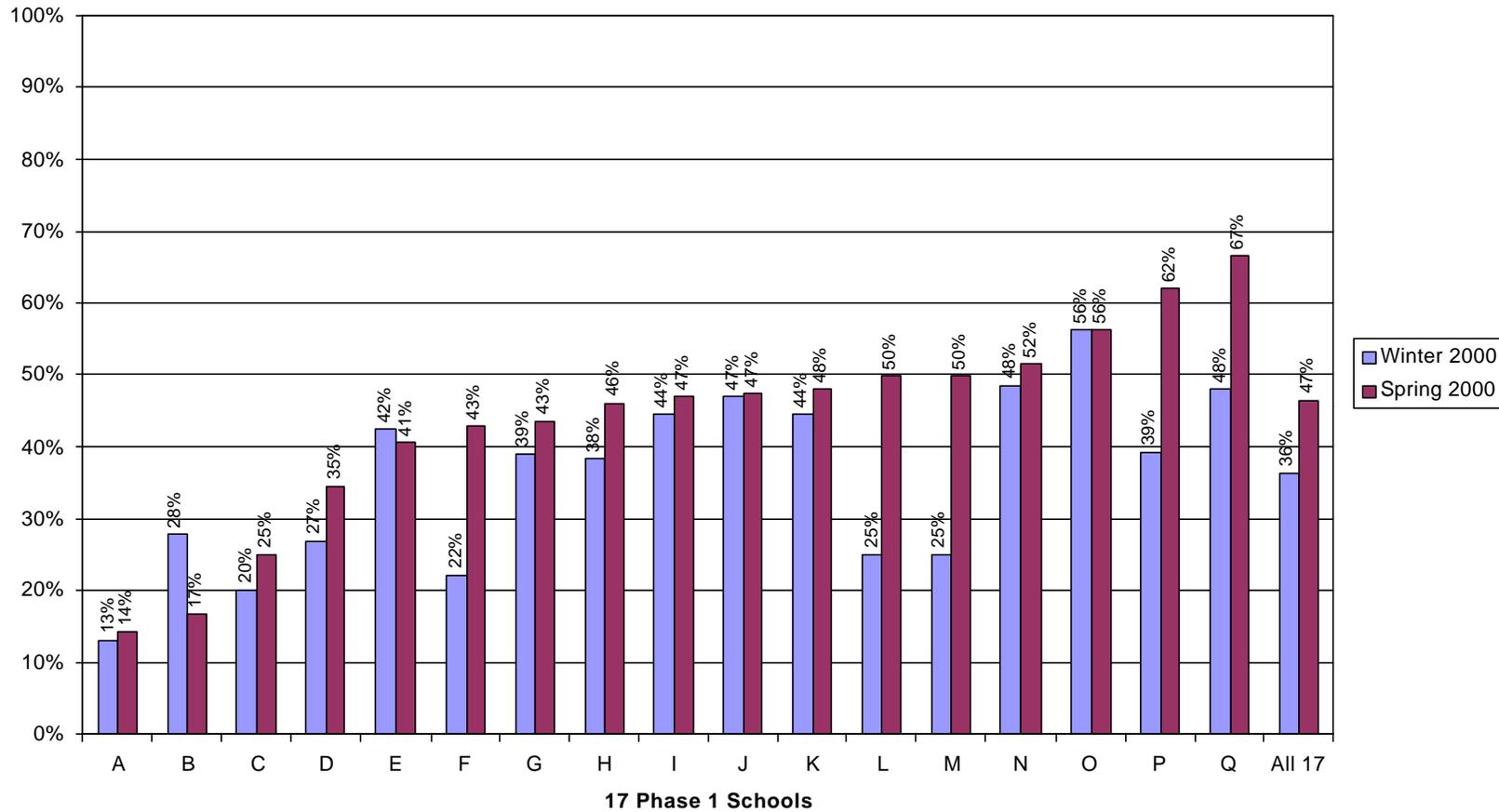


Exhibit D

Percentage of Grade 2 Students Meeting Reading Initiative Goal in 18 Phase 2 Schools

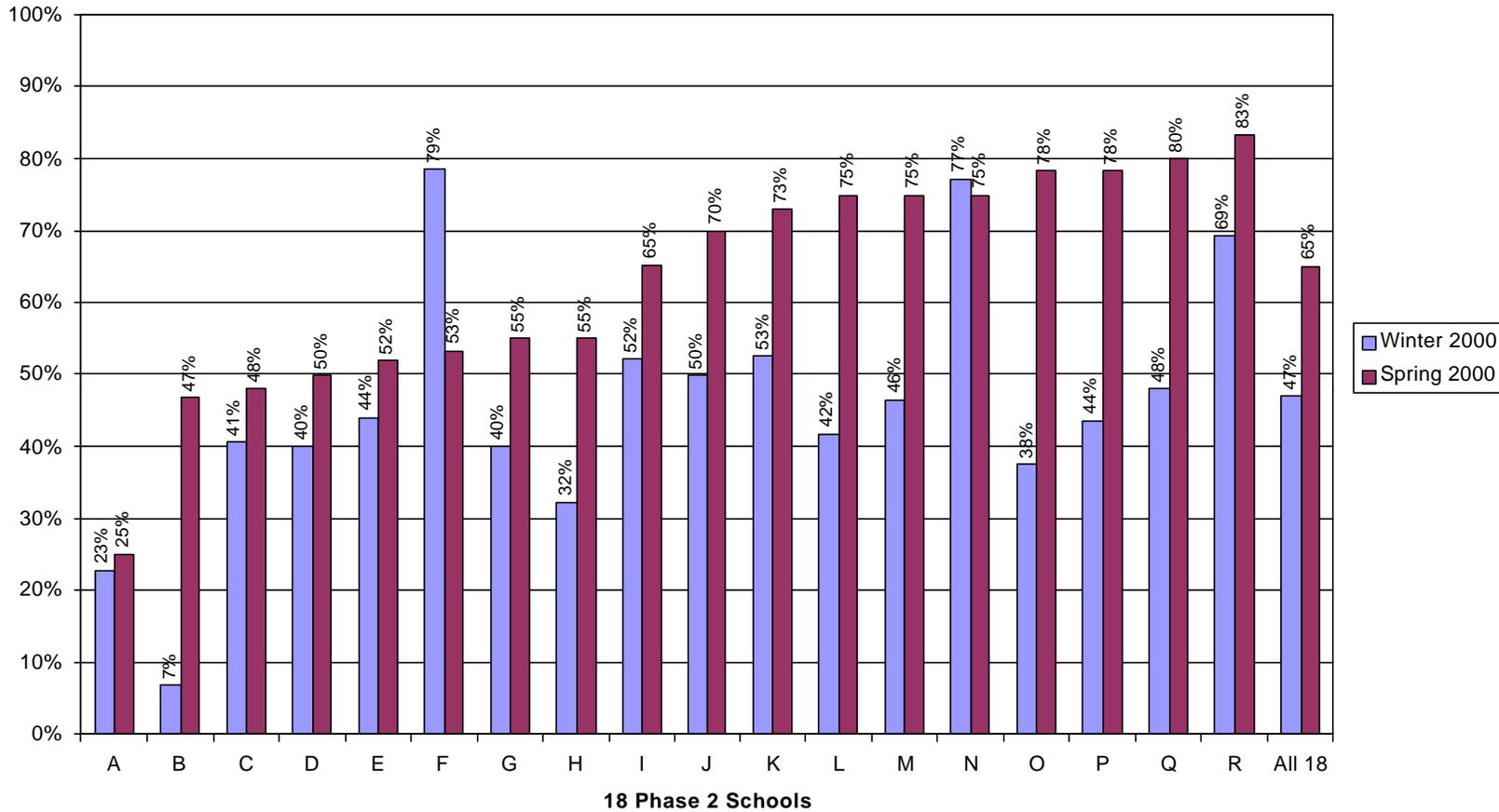


Exhibit E

Percentage of Grade 2 Students Reading at the Fluent Stage In Spring 1999 and Spring 2000 For Six Schools in 1999 and 2000 Reading Initiative Study Samples

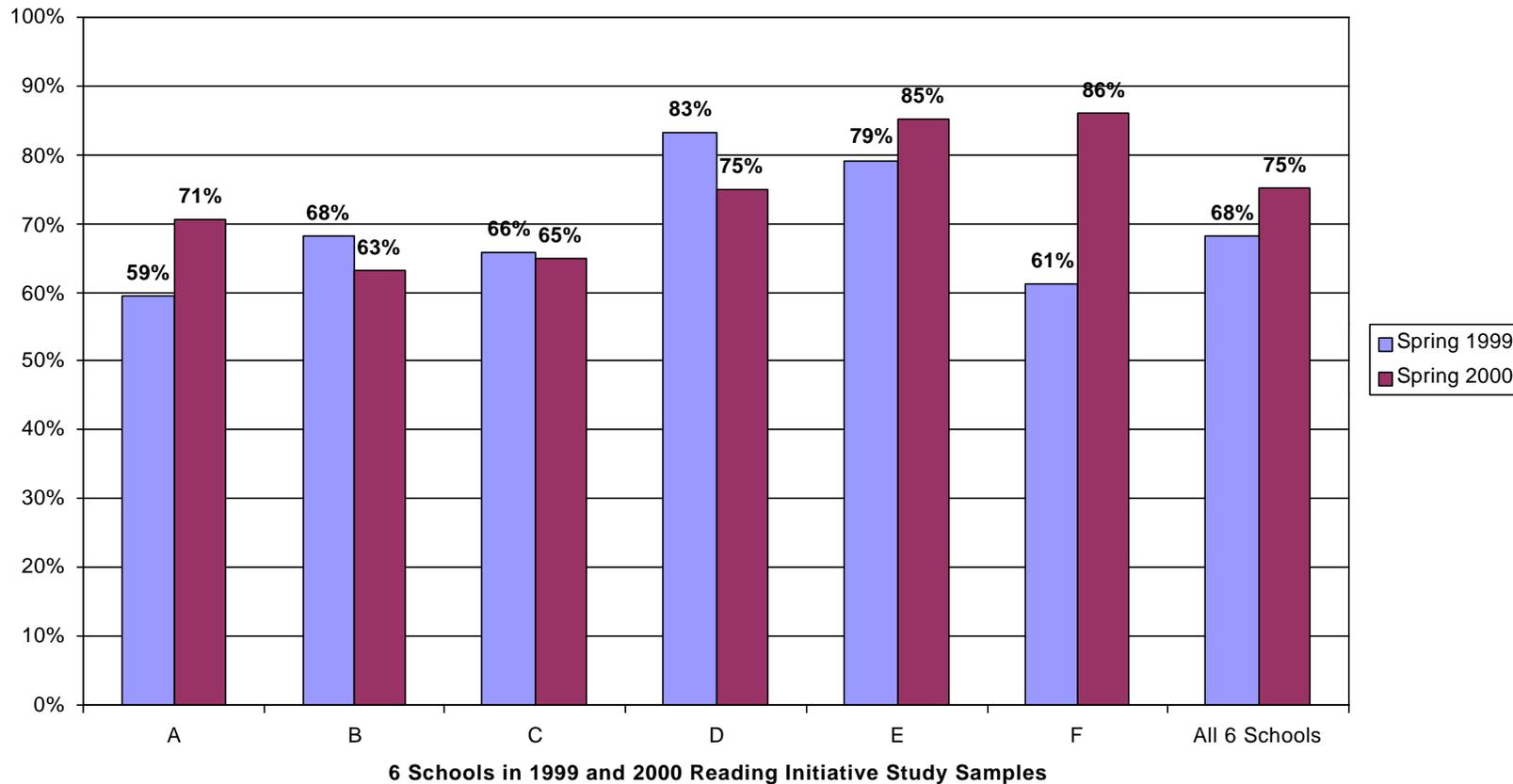


Exhibit F

Percentage of Grade 2 Students Meeting the Reading Initiative Goal In Spring 1999 and Spring 2000 For Six Schools in 1999 and 2000 Reading Initiative Study Samples

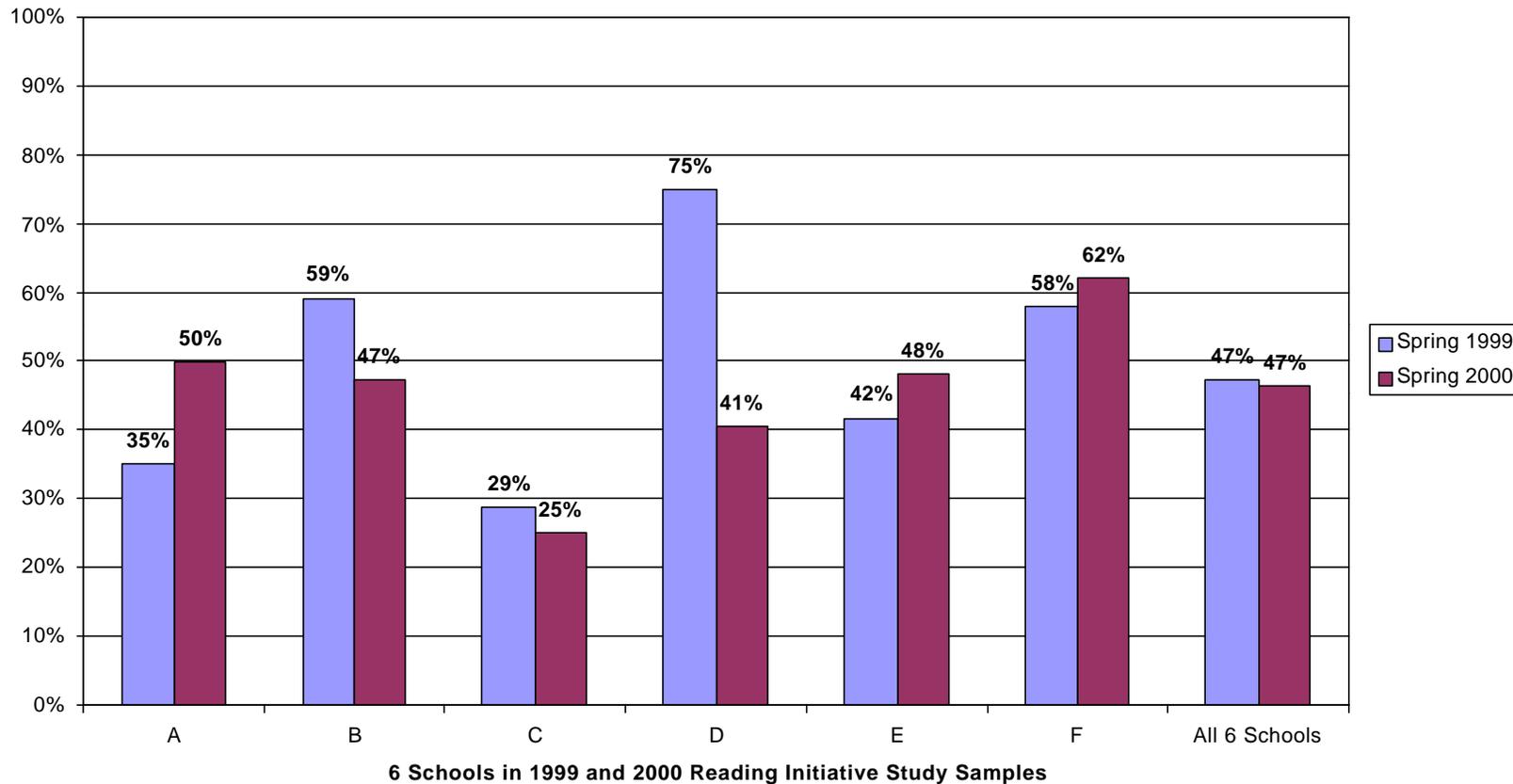


Exhibit G			
Mean Percentile Scores Before and After Implementation of the			
Reading Initiative on Grade 3 CRT-Reading in Phase 1 Schools *			
School	Spring 1998 **	Spring 1999 **	Spring 2000 ***
100	56	59	55
106	57	61	65
111	59	63	60
159	69	66	70
206	54	59	60
207	67	59	64
210	62	59	63
212	59	53	65
242	62	53	65
304	53	50	49
305	71	65	63
309	56	56	53
310	74	63	66
312	61	68	64
313	63	60	63
334	66	56	54
514	65	67	65
549	72	66	66
552	63	60	59
553	57	54	61
555	64	59	53
556	66	64	68
558	62	63	63
559	64	57	59
561	61	59	59
563	56	52	54
564	62	58	62
565	70	71	74
566	73	73	72
568	60	65	61
569	62	62	58
747	67	64	62
756	64	65	67
767	59	49	53
769	66	66	65
771	61	62	64
772	58	63	64
773	70	64	70
774	59	49	53
777	58	59	54
784	67	73	63
786	59	67	65
788	54	52	54
795	61	61	56
797	54	51	54
803	63	69	74
805	62	61	62
807	61	57	56
808	70	72	69
817	55	63	62
Total	62	61	61
N	3439	3491	3932

*For all students receiving the standard administration and enrolled in MCPS for at least 2 years

**Mean for all students who took CRT in 50 Phase 1 schools; note that 4 of the 54 Phase 1 schools are primary K-2 elementary schools and thus do not have Grade 3 CRT results for 1998 and 1999.

***Mean for all students who took 2000 test and were enrolled in any Phase 1 schools November 1998-June 1999

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