This paper is a summary of the evaluation of the second complete year of the implementation of the Alabama Reading Initiative (ARI), which is designed to achieve 100% literacy by targeting reading performance of beginning reading and first-grade students, to expand the reading power for second- through twelfth-grade students and to intervene for struggling readers at all grade levels. In its second year of implementation, approximately 27,700 students, 2,354 teachers, 81 principals, 75 reading specialists, 64 higher education partners, and 221 preservice teacher education programs were directly involved in the ARI. The evaluation used information from student achievement data from surveys completed by teachers, reading specialists, principals, higher education partners, and higher education reading faculty. Both qualitative and quantitative data were analyzed. A pretest-posttest design was used to examine change over time for student outcomes. Results and recommendations regarding delivery of the ARI are: a large percentage of principals, teachers, reading specialists, and higher education partners reported the ARI had substantial positive impacts on student literacy; the principal should receive sufficient support, direction, and encouragement because their leadership role was related to gains in reading scores; the visibility and involvement of the reading specialist and higher education partner influenced teachers' attitudes toward the helpfulness of these individuals; higher education faculty in the program are often confronted with inadequate or competing reward structures; teachers involved in the first 2 years of the program felt that continued professional development would help sustain their enthusiasm; the Stanford Achievement Test, Level 9 is not the most appropriate measure for monitoring progress toward program goals; tests currently used to assess early literacy skills of kindergarten through second-grade students are inappropriate for use as tools.
for evaluating gains associated with ARI; and case studies of particularly effective schools should be conducted. (RS)
EXECUTIVE SUMMARY
1999-2000
EVALUATION OF THE ALABAMA READING INITIATIVE

Prepared for the
Alabama Commission on Higher Education

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EXECUTIVE SUMMARY

This is a summary of the evaluation of the second complete year of implementation of the Alabama Reading Initiative (ARI). In its first year of implementation, evaluators from the University of Alabama at Birmingham (UAB) and the University of Alabama at Huntsville (UAH) found that students in ARI Literacy Demonstration Sites (LDSs) demonstrated greater gains on the Stanford Achievement Test, Ninth Edition (Stanford 9) than would have been expected without the benefit of the ARI. These students also scored better than students in comparison schools on the Stanford 9. Included in this second evaluation report are the 16 original LDSs (called Group A) that began implementation during the 1998-99 school year and the 65 new LDSs (called Group B) added during the 1999-2000 school year.

The Alabama Reading Initiative

The Alabama Reading Initiative (ARI) is a statewide effort directed by the State Department of Education to improve reading instruction and achieve 100% literacy among K-12 public school students. Unique features of the ARI include:

- Participating schools must set a goal of 100% literacy;
- At least 85% of the faculty must attend a 10-day professional development institute;
- The principal must attend the institute and lead approximately 10 hours of faculty meetings during which faculty members develop implementation plans;
- Faculties must be willing to adjust reading instruction to reflect research-based practices;

1 See “Evaluation of the Alabama Reading Initiative 1998-1999,” prepared for the Alabama Commission on Higher Education by the Center for Educational Accountability, University of Alabama in Birmingham, Birmingham, AL.
Attention is paid to increased performance of all students: beginning readers, accomplished readers, and struggling readers; and

LDSs form partnerships with educators from teacher education programs in Alabama’s Institutions of Higher Education (IHEs).

In its second year of implementation, approximately 27,700 students, 2,354 teachers, 81 principals, 75 reading specialists, 64 higher education partners to those schools, and 21 pre-service teacher education programs in Alabama’s IHEs were directly involved in the ARI.

The Evaluation Plan

The second year evaluation of the ARI was designed to document progress toward 100% literacy in the 81 LDSs, identify factors associated with successful results, and to ascertain the impact of ARI on pre-service teacher education as a result of involvement in the ARI. The evaluation answers six questions:

1. To what extent are ARI schools making progress toward 100% literacy?
2. Which ARI schools are making progress toward 100% literacy and which are not?
3. What factors are related to school outcomes?
4. Why are some ARI schools making more progress than others?
5. To what extent are the elements of ARI reflected in pre-service teacher education programs throughout Alabama?
6. What ARI factors are related to change in pre-service teacher education programs?
These questions were addressed using information from the *Stanford Achievement Test, Ninth Edition (Stanford 9)*, and surveys completed by teachers, reading specialists, principals, higher education partners, and higher education reading faculty.

**Key Findings**

**Answer to Question 1: ARI schools made more progress toward 100% literacy than did non-ARI schools. Specifically:**

- Improvements in Normal Curve Equivalency (NCE) scores across Reading Comprehension, Reading Vocabulary, and Total Reading between 1998 and 2000 averaged 1.05 for Group A ARI schools and .24 for non-ARI schools (all other Alabama public schools). Improvements in NCE scores across all these reading subtests between 1999 and 2000 averaged .28 for Group B ARI schools and .20 for non-ARI schools. These improvements translated into small but positive differences in effect sizes² favoring ARI schools for each reading subtest for Group A and B.

- As a group, ARI schools decreased the population of “struggling readers” (students scoring in the bottom three stanines on the *Stanford 9* reading subtests) by as much as 10%. Parallel reductions in the percentage of struggling readers in non-ARI schools over the same periods of time were less than half that of the ARI schools:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Group A</td>
<td>Non-ARI</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>10.19%</td>
<td>4.68%</td>
</tr>
<tr>
<td>Comprehension</td>
<td>8.45%</td>
<td>.02%</td>
</tr>
</tbody>
</table>

² An NCE score is similar to a percentile score in that it can take values between 1 and 99. Unlike percentile scores, NCE scores can be averaged, allowing means to be calculated across schools and across grade levels.

³ Effect sizes are indices of the practical significance of differences between average scores. They are determined by computing the differences between means for two groups and then dividing the difference by the amount of dispersion in the scores (standard deviation). Effect sizes may be positive or negative.
ARI schools increased the percentage of “grade-level readers” (students scoring in the top five stanines) more than non-ARI schools over the same periods of time. ARI Group A schools increased at rates that ranged from 2.18% to 4.56% as compared to rates of .72% to 2.31% for non-ARI schools. The rate of increase for Group B schools ranged from 1.28% to 1.84% as compared to rates of increase for non-ARI schools that ranged from .87% to 1.01%.

Answer to Question 2: Findings support that the vast majority of ARI schools are making progress toward the goal of 100% literacy. Still, there is considerable variability in the gains made by ARI schools.

Approximately 70 percent of ARI schools demonstrated small gains (effect sizes greater than 0 and less than .40) on Reading Vocabulary, Reading Comprehension, or Total Reading; and an additional five percent of ARI schools made moderate (effect sizes between .40 and .70) or large gains (effect sizes of greater than .70) on these measures. An example of the trends in performance across schools is seen in Figure 1 on the next page. This figure graphically displays the range of change in the percentage of “grade-level readers” (i.e., students scoring at or above stanine 5 on the Reading Comprehension subtest) for Group A and Group B. The figure reveals that while the majority of schools in Cohorts A and B made positive changes, some schools do particularly well and some schools do less well in terms of the indicator. Similar ranges of performance between schools were found for all indicators of literacy.
Because of the variability illustrated in the figure above, it was important to identify factors that might account for differences in the performance of ARI schools. Efforts to identify such factors are summarized in Questions 3 and 4 later in this Executive Summary.

Other indicators of positive, yet variable progress among ARI schools include the following:

- *Stanford 9* scores revealed **positive progress toward 100% literacy** on one or more of the reading subtests (effect sizes ranging from .01 to .72) in 13 of the 15 Group A schools that have *Stanford 9* scores and 45 of the 61 Group B schools.
- **Decreases in the percentage of struggling readers** (.02% to 18%) occurred in 10 of the 15 Group A schools and 47 of the 61 Group B schools on one or more of the reading subtests.
- **Increases in the percentage of students scoring “on grade level”** (.05% to 28%) occurred in 13 of the 15 Group A schools and 51 of the 61 Group B schools on one or more of the reading subtests.
• Systematic and substantial decreases in discipline and special education referrals were found in the subset of ARI schools (7 in Group A and 27 in Group B) that reported such data. Discipline referrals in the reporting Group A schools decreased by 67%, from 1,795 referrals in 1998 to 596 referrals in 2000. The average decrease in discipline referrals across the 27 reporting Group B schools was 23%.

• As a group, the eight reporting Group A schools decreased special education referrals by 28% from 1998 to 2000. The 33 reporting Group B schools decreased special education referrals by 14% from 1999 to 2000.

To understand why some schools demonstrated marked improvement and others showed losses in achievement, subsets of higher- and lower-performing schools were identified. The method used for identifying higher- and lower-achieving ARI schools included approximately 26 improvement indicators from the Stanford 9. Schools included in the final subsets of higher- and lower-performing ARI schools were those that demonstrated substantial consistency across these improvement indicators. Seven Group A schools were identified as higher-performing schools and two Group A schools were identified as lower-performing. In Group B, 14 schools were identified as higher-performing and eight were identified as lower-performing.

Answer to Questions 3 and 4: Several factors discriminated higher- and lower-performing ARI schools. The leadership of the principal and the helpfulness of the reading specialist had the greatest impact on student achievement. Specifically:

• The Principal as ARI Champion. Other than the ARI training itself, data point to the principal as having the greatest impact on student achievement. Correlations between principal leadership scores as provided by teachers, higher education
partners, and reading specialists and *Stanford 9* effect were .20 or greater between leadership and one or more of the reading scores. In higher-performing ARI schools, the principal supported implementation by facilitating ongoing professional development; providing resources and materials; adjusting schedules in order to enhance reading instruction; supporting and monitoring teacher implementation in the classroom; and encouraging faculty members. In lower-performing schools little or no support was noted.

- **The Hands-On, Helpful Reading Specialist.** The reading specialist also made a difference. The large majority of teachers in both higher-performing and lower-performing schools considered the role of the reading specialist as important to the successful implementation of ARI. Seventy percent (70%) of the teachers expressed in surveys that the reading specialist was important to serving the needs of students and teachers. However, teacher and principal ratings of the helpfulness of the reading specialist were greater in higher-performing schools than in lower-performing schools. Correlations in excess of .20 were found between teachers' ratings of the helpfulness of the reading specialist and the scores for Reading Comprehension and Reading Total on the *Stanford 9*. Teachers reported that the reading specialist impacted reading skills of struggling readers by working with them directly and by encouraging and assisting teachers. Teachers also commented on the help that reading specialists provided through program oversight, professional development, and materials and resources.

\*Correlations are statistical values that range from -1.0 to 1.0. They relate one score to another score. For example, if scores on principal leadership are positively correlated with scores on the *Stanford 9*, we can conclude that increases in principal leadership are associated with gains on the *Stanford 9*. The higher the correlation is, the greater is the association between leadership and gains.\*
• **The Deeply Involved Higher Education Partner.** Differences existed in higher- and lower-performing schools in the perceived helpfulness of the higher education partner, particularly as evaluated by the reading specialist. In higher-performing schools, reading specialists report that higher education partners had direct involvement with students, teachers, and reading specialists. They conducted professional development sessions; modeled instruction; arranged for workshops; worked with struggling readers; worked one-on-one with teachers in their classrooms; trained new teachers in the ARI modules; and consulted with the principal. Higher education partners in lower-performing schools were reported to serve more as an emotional support. They listened and encouraged but were less likely to be reported as offering subject matter-related expertise, demonstrations, consultation, and problem-solving.

• **Other Implementation Influences.** Other factors discriminating higher- and lower-performing schools were teacher reports of the rates at which ARI components were implemented, ongoing professional development hours, increased attention to student reading time, greater attention to reading instructional strategies, more ongoing assessment of student progress, and increased focus on struggling readers.

In addition, teachers responding to survey data reported that ARI had positive impacts on their teaching and student learning. Changes in teaching included use of research-based strategies, increases in time dedicated to student reading, increased confidence and enthusiasm toward reading instruction, increased awareness of struggling readers, and positive school-wide change in the learning environment.
Changes reported in student learning included improved reading skill, improved writing abilities, and increased motivation to read.

Answer to Questions 5 and 6: Findings indicate that changes in course content occurred in pre-service teacher education programs throughout Alabama as a result of the ARI. Survey data suggest further that teacher education faculty members perceived the ARI to benefit their teaching and their pre-service students.

Specifically:

- All higher education partners and reading faculty who responded to surveys indicated changes in course content that reflected material contained in the ARI teacher training modules and other ARI-published documents.

- All higher education partners and reading faculty who responded to surveys indicated that current course syllabi incorporated the new reading standards adopted by the Alabama State Board of Education in December 1999. Those standards reference specifically Knowledge and Skills Teachers Need to Deliver Effective Reading Instruction, a document developed by the ARI and published by the Alabama State Department of Education in February of 1998.

- A frequently mentioned impact of the ARI on pre-service teacher education programs was the effectiveness of pre-service teaching experiences in Literacy Demonstration Sites where students could observe, complete field experiences and internships, and become a part of research-based, effective practice.

Limitations to the Evaluation

The results of the Year Two Evaluation of the Alabama Reading Initiative must be interpreted within the context of several conditions:
1. Student outcome data came almost exclusively from the *Stanford Achievement Test – Ninth Edition (Stanford 9)*, a norm-referenced measure that forms the accountability system in Alabama. Three items are worth considering when interpreting results:

- The primary purpose of a norm-referenced instrument is to compare achievement of individuals or groups to that of the norming group. Norm-referenced achievement instruments such as the *Stanford 9* are not created as direct measures of the literacy level of the reader.

- Since the *Stanford 9* is the accountability instrument for Alabama, the evaluation of the ARI is occurring within a competitive environment where all schools in Alabama are expected to perform to a state-established standard on this test. The fact that ARI schools made greater gains than those found in non-ARI schools is noteworthy given the efforts that all Alabama schools are making to improve achievement on the *Stanford 9*.

- Given the nature of norm-referenced tests, factors such as regression toward the mean and insensitivity to small differences or gains could account for some variability in gains reported for ARI schools.

2. The tests currently used to assess early literacy skills of students in kindergarten through second grade are not designed to assess ongoing development of reading ability during the first three years in school. Therefore, the evaluation does not present information concerning the progress of students in Grades K-2, where progress might be expected to occur at a greater rate than in upper grades.

3. All information from survey data was self-reported and was not verified by on-site observations.
4. A specific model was used to identify higher-performing and lower-performing schools. It is likely that other models using different selection criteria would, to some degree, identify different subsets of higher- and lower-performing schools. Therefore, conclusions regarding differences between higher-performing and lower-performing schools should not be generalized beyond the model used for this evaluation.

**Recommendations**

Based on the findings of the evaluation as well as the limitations discussed above, the evaluators make the following recommendations to the ARI and subsequent evaluations of the initiative:

1. **Place greater emphasis on the central role of the principal** in facilitating the effective implementation of ARI.

2. **Work to increase the helpfulness of all reading specialists.** Additionally, seek ways of increasing the number of reading specialists, since a prerequisite to “helpfulness” appears to be their availability to work directly with struggling readers and with teachers. This is particularly important since the number of ARI schools is growing substantially (425 in 2001-2002), but the rate of state funding is not increasing proportionately.

3. **Develop strategies to increase the direct involvement of higher education partners** in assisting classroom teachers. This is challenging since the number of ARI schools will grow to 425 in 2001-2002, and there are relatively few higher education reading faculty who could provide direct assistance to classroom teachers. Additionally, there is a need for creative incentives that reward service to ARI
schools within the traditional higher education faculty evaluation framework of service, scholarship, and teaching.

4. Explore ways of providing continued professional development, support, and recognition to schools beyond the first year of implementation.

5. Increase, to the extent possible, the use of criterion-referenced measures that are designed to document progress of students toward reading at or above grade level. Implementing fall and spring testing using the individual or group form of the criterion-referenced reading assessment currently administered in kindergarten through Grade 2 and/or linking these measures psychometrically would permit the use of available instruments for this purpose.

6. Include longitudinal data on “matched” students across grades within schools in future evaluation efforts.

7. Include case studies of the higher-achieving and lower-achieving ARI schools that include observation data as well as interview data.

8. Require the collection of other school outcome measures such as discipline referrals, special education referrals, and library circulation so that such data can be reported by all schools participating in the ARI.
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