

Evaluation of Accelerated Reading Instruction (ARI) and Accelerated Math Instruction (AMI) Program

2004-2005 School Year

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Table of Contents

Executive Summary.....	6
Program Reach.....	6
Program Funding	7
Use of Funds and Instructional Strategies	7
Outcomes	8
Section I: Introduction	10
The Student Success Initiative.....	10
Major Initiatives of the SSI.....	10
ARI/AMI Funding	11
Organization of the Report	13
Section II: Students Identified and Served	14
Total Students Served, 1999-2005.....	14
Students Identified as Struggling Readers.....	16
Struggling Readers Served by the ARI Program.....	18
Students Served by the AMI Program	21
Section III: Use of ARI and AMI Funds.....	23
Overall Distribution of Expenses.....	23
Allocation of Funding by Districts	26
Instructional Grouping and Time of Instruction Strategies	27
Section IV: Student Testing and ARI/AMI Outcomes	31
Performance Outcomes for Students Served by the ARI/AMI Program.....	31

Reading.....	31
Student Testing: Texas Primary Reading Inventory/Tejas LEE.....	33
Section V: Conclusion	36

Table of Figures

FIGURE 1: PERCENT OF STUDENTS ENROLLED WHO WERE IDENTIFIED AS STRUGGLING IN READING, 2004-2005 SCHOOL YEAR.....	17
FIGURE 2: PERCENT OF STUDENTS IDENTIFIED AS STRUGGLING IN READING WHO WERE SERVED BY THE ARI PROGRAM, 2004-2005 SCHOOL YEAR	19
FIGURE 3: PERCENT OF STUDENTS ENROLLED WHO WERE IDENTIFIED AS STRUGGLING IN MATH, 2004-2005 SCHOOL YEAR.....	20
FIGURE 4: PERCENT OF STUDENTS IDENTIFIED AS STRUGGLING IN MATH SERVED BY AMI PROGRAM, 2004-2005 SCHOOL YEAR.....	22
FIGURE 5: DISTRIBUTION OF ARI/AMI EXPENSES, 2004-2005 SCHOOL YEAR.....	24

Executive Summary

The Student Success Initiative (SSI), originated by Senate Bill (SB) 4 of the 76th Texas Legislature, and expanded during the 77th and 78th Texas Legislatures, aims to provide students with comprehensive research-based instruction to prepare them for academic success. A major component of the SSI mandates new grade advancement requirements that students advance to the next grade level only if they meet the passing standard of specified sections of the Texas Assessment of Knowledge and Skills (TAKS) or if the student's Grade Placement Committee (GPC) determines unanimously that the student is likely to be successful at the next grade level with accelerated instruction. In order to ensure that the students meet these goals, the Legislature has funded a number of major education initiatives including teacher reading and math academy training, diagnostic assessment of students, and the Accelerated Reading Instruction (ARI) and the Accelerated Math Instruction (AMI) program for students struggling in these subject areas.

The focus of this report is the ARI/AMI program. It identifies the students served by the program and how funds were used by local education agencies (LEAs) (e.g., school districts and open-enrollment charter schools) to achieve program goals, and concludes with an analysis of aggregated student achievement outcomes for program participants.

Program Reach

The accelerated instruction initiative has grown over the years since the inception of the ARI program during the 1999-2000 school year. In 2003-2004, accelerated math instruction was added to the program. Each year, an additional grade has been added to ARI and AMI programs, expanding the reach of the initiative. By the 2004-2005 school year:

- The ARI program provided service to almost six times the number of students that it served during its initial year (75,340 during the 1999-00 school year and 448,382 during 2004-2005);
- The AMI was added in 2003-2004, initially serving 273,810 struggling math students; during the 2004-2005 school year students utilizing AMI increased by almost 100,000 (from 273,810 to 361,511); and
- ARI/AMI program funding was used to serve, at least in part, more than 80% of the K-5 students identified as being at risk in either reading or math. Services provided to the student population not served through the ARI/AMI program were funded exclusively through other sources.

Program Funding

ARI/AMI funding consists of non-competitive grants awarded on a formula basis. Funding in 2004-2005 for ARI was based on the number of students who did not pass the first administration of the 2004 Grade 3 TAKS reading assessment, with LEAs receiving \$905.84 for each student who failed to pass. Funding for 2004-2005 AMI was based on the number of students who did not pass the first administration of the 2004 Grade 5 TAKS math section, with LEAs receiving \$905.84 for each child who did not pass. Historical funding levels for the program for the past five years are as follows:

- 2000-2001: \$65.2 million;
- 2001-2002: \$57.5 million;
- 2002-2003: \$106.4 million;
- 2003-2004: \$75.1 million; and
- 2004-2005: \$80.9 million.

Use of Funds and Instructional Strategies

Analysis of how LEAs used their ARI/AMI funds revealed that:

- Over 90% of all 2004-2005 ARI/AMI funds were concentrated in two broad budget categories – payroll costs and supplies/materials; and
- LEAs spent the bulk of their funding on four specific budget items: Teacher Pay (25%), Supplemental Curriculum (24%), Tutor Pay (18%), and Other Supplies and Materials (15%).

The predominant instructional grouping strategies and time of instruction strategies used by the districts indicate that they are in line with recommended “best practices” deemed to be most effective. Key findings related to these strategies are as follows:

Instructional Grouping Strategies

- More than 80% of the LEAs indicated that they used ARI Teacher and Tutor Pay predominantly for Small

Group instruction – this finding also held for AMI;

- More than 60% of the LEAs indicated that funds spent on Supplemental Curriculum and Other Supplies and Materials to support the ARI and AMI programs were used primarily for Small Group instruction and approximately 22% noted that funds were concentrated on Whole Group instruction.

Instructional Timing Strategies

- There was substantial variation in how LEAs spent ARI and AMI funds on the various instructional timing strategies (i.e., Before School, During School, After School, Summer School).
- In terms of Teacher Pay, about 40% of the LEAs used ARI/AMI funds for Summer School instruction, and more than 30% for instruction during regular school hours. Approximately 40% of the LEAs used ARI and AMI funds on Tutor Pay almost equally for During School and After School activities. However, Tutor Pay was more likely than Teacher Pay to be used primarily for After School instruction, and less likely to be used for Summer School instruction.
- For Supplemental Curriculum materials, the vast majority of LEAs spent their ARI/AMI funds primarily to support regular school day instruction.

Outcomes

Data reported through the statutorily required Early Reading Instruments (ERI) report, as well as ARI/AMI-specific measures, suggest that the ARI/AMI program is working to bring struggling students on grade level by the end of the school year. Evidence of improvement in student performance at LEAs is as follows:

Reading Results

- Of Kindergarten through Grade 5 students identified as struggling in reading and served by the ARI program, 63% were reading on level by the end of the year;
- The proportion of ARI students reading on level by the end of the school year was lowest in Grades 1 and 2 (57%) and highest in Grade 3 (72%).
- Overall, LEAs had larger percentages of children testing as “developed on screen” (i.e., demonstrating essential reading concepts) at the end of the year when compared to their performance at the beginning of the year;

Math Results

- Of the 361,511 Kindergarten through Grade 5 students identified as struggling in math and participating in the AMI program, 68% were on level in mathematics by the end of the year;
- Similar to the reading results, the proportion of AMI students on level in mathematics by the end of the school year was lowest in Grades 1 and 2 (64%) but highest in Kindergarten (73%) .

Overall, ARI/AMI funding to promote accelerated instruction in reading and math appears to be reaching Texas school children in need and is working to achieve positive outcomes for these students in Grades K-5.

Section I: Introduction

The Student Success Initiative

The Student Success Initiative (SSI), through the Texas Reading Initiative, the Texas Math Initiative, and recent efforts to improve student readiness in science, originated during the 76th Legislature in 1999 and was expanded during the 77th and 78th Legislatures. A major component of the SSI mandates new grade advancement requirements. As specified by these requirements, a student may advance to the next grade level only by meeting the passing standard of the Texas Assessment of Knowledge and Skills (TAKS) tests in these program areas or if the student's Grade Placement Committee (GPC) determines unanimously that the student is likely to perform at the next grade level with accelerated instruction. Implementation of the SSI grade advancement requirements are being phased in as follows:

- Beginning in the 2002-2003 school year, and continuing thereafter, for the Grade 3 TAKS Reading test;
- Beginning in the 2004-2005 school year, and continuing thereafter, for the Grade 5 TAKS Reading and Mathematics tests; and
- Beginning in the 2007-2008 school year, and continuing thereafter, for the Grade 8 TAKS Reading and Mathematics tests.

Major Initiatives of the SSI

As noted above, a key component of the SSI legislation requires that Grade 3 students meet the passing standard of the reading portion of the TAKS and Grade 5 students meet the passing standard of the reading and mathematics portions of the TAKS, in order to be promoted to the next grade level. The reading requirement began in 2003 and continues for enrolled Grade 3 students each school year thereafter, and the reading and mathematics requirement went into effect in 2005 for Grade 5 students. In order to ensure that Texas students meet these goals, the Legislature funded four major initiatives:

- Teacher Reading and Math Academy training;
- Diagnostic assessment (Commissioner's List of Early Reading Instruments);
- Accelerated Reading Instruction (ARI) funding for early reading instruction intervention efforts for those

students who, based on the results of the data collected through the Early Reading Instruments (ERI) report have been identified to be at risk for reading difficulties, including dyslexia; and

- Accelerated Math Instruction (AMI) funding for early mathematics instruction intervention efforts for those students who, based on the results of the diagnostic assessments, have been identified as struggling mathematics learners.

The focus of this evaluation report is the ARI/AMI program. Beginning with the 1999-2000 school year, LEAs began implementation of early intervention programs to accelerate reading instruction for those students identified as at risk for reading difficulties. In 2003-2004, the program was expanded to include accelerated mathematics instruction, in addition to reading instruction, which has been part of the program since its inception.

ARI/AMI Funding

The ARI/AMI program provides immediate and accelerated instruction in reading and math for students struggling in those program areas. Priority is given to the students in greatest need of assistance as identified by results of diagnostic tests. For both reading and math, the program recommends 30 to 45 minutes of targeted instruction per day with flexible small groups (up to four students) and the use of scientific-based instructional strategies. Program guidelines also recommend intervention during the regular school day with frequent monitoring of student progress during the year. Provision of an intervention program during the regular school day is essential to meet the needs of all identified students because attendance cannot be mandated for after-school or extended-year program participation.

The ARI/AMI program was phased in, starting with reading instruction for Kindergarten students during 1999-2000; Kindergarten and Grade 1 during 2000-2001; Kindergarten through Grade 2 in 2001-2002; Kindergarten through Grade 3 in 2002-2003; Kindergarten through Grade 4 in 2003-2004 (and the additional accelerated math instruction component); and Kindergarten through Grade 5 in 2004-2005 (and the additional accelerated math instruction component). This phase-in period paralleled the roll-out of the Teacher Reading Academies (TRAs) – starting with Kindergarten teachers in 1999-2000 and progressing through the training of Grade 3 teachers in 2002-2003. The TRAs were conducted during the summer break following the school year.

ARI/AMI funding consists of non-competitive grants awarded on a formula basis. Funding in 2004-2005 for ARI was based on the number of students who did not pass the first administration of the 2004 Grade 3 TAKS reading assessment, with LEAs receiving \$905.84 for each student who failed to pass. Funding for 2004-2005 AMI was based on the number of students who did not pass the first administration of the 2004 Grade 5 TAKS math section, with LEAs receiving \$905.84 for each child who did not pass. Historical funding levels for the program for the past five years are as follows:

- 2000-2001: \$65.2 million;
- 2001-2002: \$57.5 million;
- 2002-2003: \$106.4 million;
- 2003-2004: \$75.1 million; and
- 2004-2005: \$80.9 million.

This report is based on an analysis of 2004-2005 school year data, when the program targeted all students in Grades K-5 who were identified as struggling in reading and math.

The purpose of this report is as follows:

- to provide a snapshot of the students served by the 2004-2005 ARI/AMI program funding;
- to describe how the funds were used by LEAs to improve student achievement in reading and mathematics;
and
- to determine the impact the program has had on student achievement for students struggling in reading and mathematics.

The findings presented in this study are based on 2004-2005 school year (i.e., September 1, 2004-August 31, 2005) data submitted to TEA through the Consolidated Reading Instrument (CRI) Report. The CRI Report consists of three main sections: 1) the ARI/AMI Program Evaluation Report; 2) the Early Reading Instruments (ERI) Report; and 3) the ARI/AMI Program Expenditure Report. The report was completed by LEAs in fall 2005.

Organization of the Report

Following this introduction, Section II describes the student populations identified as struggling in reading and mathematics, as well as the number of students who received services through the ARI and AMI programs. Section III describes how LEAs used their funding by showing how the money was distributed across different budget items. It also looks at LEA reports on how the money was used for instructional grouping and timing strategies. Section IV details reading and mathematics outcomes for ARI and AMI participants, and Section V summarizes key findings and provides conclusions to this study.

Section II: Students Identified and Served

With the goal of providing early intervention to address reading difficulties in elementary school students, the ARI program targets struggling readers who have been identified as such either by approved diagnostic assessment tools or by another method of assessment that has been selected by their district committee, and with input from their teachers. Accelerated reading instruction provides struggling readers with immediate, systematic and explicit instruction using materials and methods that have been proven to be effective. While the SSI specifically requires that students failing each administration of the TAKS be provided with accelerated instruction, it is recommended that ARI funding be directed to the specific reading skills that have been determined to be lacking, rather than using TAKS Preparatory (Prep) materials *per se* in the provision of instruction.

Total Students Served, 1999-2005

During the first year of funding (1999-2000), the ARI program served 75,340 Kindergarten students (Table 1). ARI funding was subsequently expanded, each year serving an additional grade. The ARI/AMI phase-in process mirrors the SSI grade advancement requirements and the roll-out of the TRA training that was also phased in. The cohort of Kindergarten students who were served by ARI during 1999-2000 is comprised of the same students who will reach each of the key SSI milestones for grade advancement when they reach Grades 3, 5, and 8.

As Table 1 indicates, the largest increase in the number of students served by the program occurred in the 2000-2001 school year, when nearly three times as many students were served (203,907) compared to the year before. By the 2004-2005 school year the ARI program was serving almost six times the number of students that it served during its initial year—a total of 448,382 students in Kindergarten through Grade 5 were served by the ARI program in 2004-2005.

The AMI program is similar to the ARI program in that it aims to reach students who are struggling in math by providing LEAs with resources to target these students with research-based methods of instruction and best practices. While the ARI program began in 1999-2000, the AMI program funding began in 2003-2004, one year before the SSI requirement for Grade 5 advancement went into effect. During this initial year of funding, AMI served 273,810 students in Grades K through 4 (Table 1). The number of students served by this program increased by almost 88,000 students during the 2004-2005 school year.

Table 1: Total Number of Students Served by the ARI/AMI Program, 1999-2005

Grades Served	School Year	Number of Students Served	
		ARI	AMI
K	1999-2000	75,340	-
K - 1	2000-2001	203,907	-
K - 2	2001-2002	304,657	-
K - 3	2002-2003	327,668	-
K - 4	2003-2004	388,619	273,810
K - 5	2004-2005	448,382	361,511
	Total	1,748,573	635,321

Source: ARI/AMI Final Evaluation Reports, Texas Education Agency, 2004-2005.

During the 2004-2005 school year, ARI and AMI program funding served over 3,000 campuses statewide with a total enrollment of 1,982,033 students in Kindergarten through Grade 5 (Table 2). As noted above, each district was provided ARI funding according to the number of students in that district failing to meet the passing standard in the first administration of the 2004 Grade 3 TAKS assessment in reading, and AMI funding according to the number of students in that district failing the 2004 Grade 5 TAKS assessment in math. Districts were provided with one formula-based allocation for the ARI/AMI program and had discretion in transferring funds from reading to math and vice-versa in order to best meet the needs of their struggling students.

Students in Grades K through 5 found to be struggling in either subject were identified by the district and targeted for accelerated instruction. Of those students identified as struggling in reading or math, ARI or AMI funding could be used exclusively or in part to fund accelerated instruction mandated by the SSI. LEAs receiving other types of funding (e.g., local funds, state compensatory education entitlements, migrant program funding, Title I funds, optional extended year program funds, etc.) could also use those financial resources to provide accelerated reading or math instruction to students. The number of students enrolled that were identified as struggling and the number of those identified that were served at least in part by ARI or AMI funds are discussed in subsequent sections of this report.

Table 2: Number of Campuses and Student Enrollment in Districts receiving ARI/AMI Funding, 2004-2005 School Year

	Grade					
	K	1	2	3	4	5
Number of Campuses Served with ARI/AMI Funds	3,256	3,379	3,432	3,639	3,570	3,377

Source: ARI/AMI Final Evaluation Reports, Texas Education Agency, 2004-2005.

Students Identified as Struggling Readers

Within each district, an assessment instrument on the Commissioner’s List of Early Reading Instruments is used to determine whether a student is struggling in reading and is in need of accelerated reading instruction. As Table 3 reflects, 555,722 students in Grades K-5 were identified as struggling readers during 2004-2005 and 448,382 of these students received accelerated reading instruction services through the ARI program (approximately 81%).

Figure 1 illustrates the proportion of students identified as needing accelerated reading instruction expressed as a

Table 3: Number of Students Identified as Struggling in Reading and Served by the ARI Program, 2004-2005 School Year

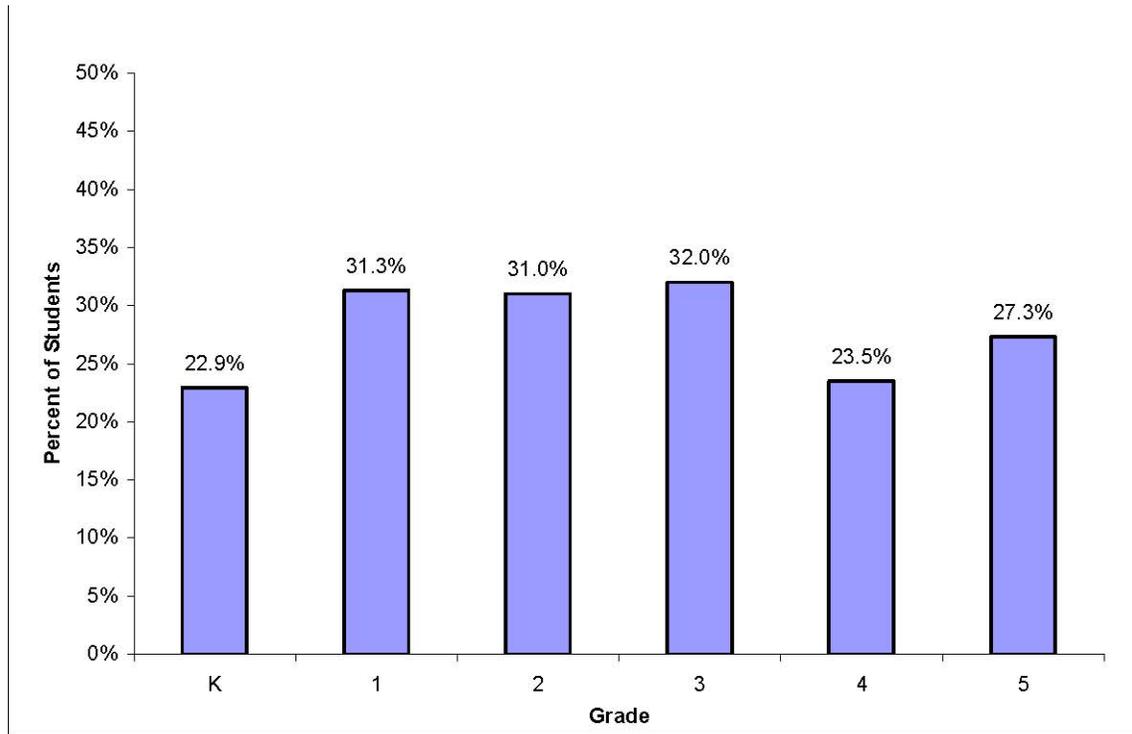
	Grade						Total
	K	1	2	3	4	5	
Number of Students Identified for ARI Program	76,340	107,773	103,337	104,418	75,862	87,992	555,722
Number of Students Served by ARI Program	58,951	82,101	80,213	88,709	62,399	76,009	448,382
Percent of Identified Students Served	77.2%	76.2%	77.6%	85.0%	82.3%	86.4%	80.7%

Source: ARI/AMI Final Evaluation Reports, Texas Education Agency, 2004-2005.

percentage of the total enrolled in each grade. Percentages for Grades 1, 2, and 3 are relatively consistent — ranging from 31% to 32%. Overall, the percentage of students identified as being in need of accelerated reading instruction ranged from a low of 23% of Kindergarten students to a high of approximately one-third (32%) of Grade 3 students — a 9 percentage point difference between the two grades. Similarly, the number of struggling readers identified in Grade 4 is lower than in Grades 1 through 3, with almost 24% of Grade 4 students identified as needing accelerated instruction.

Whether the differences in the proportion of students requiring accelerated reading instruction indicate a real

Figure 1: Percent of Students Enrolled Who Were Identified as Struggling in Reading, 2004-2005 School Year



Source: ARI/AMI Final Evaluation Reports, Texas Education Agency, 2004-2005.

difference in the numbers of struggling students in Kindergarten and Grade 4 compared to the other grades, or whether they indicate a challenge to identifying struggling readers in these grades cannot be determined from the data available. However, it is worthwhile to note that a lower percentage of identified Kindergarten students may be due in part to the fact that the most commonly used instrument for assessment, the Texas Primary Reading Inventory (TPRI) does not assess Kindergarten children until the middle of the year. By mid-year, Kindergarten students that might have been struggling at the beginning of a school year may have improved significantly.

Additionally, the TPRI early reading assessment instrument applies to Grades K through 2 only. Given that students in Grade 3 are subject to the SSI grade advancement requirements for the reading portion of the TAKS, it is not

surprising that although an early reading assessment instrument was not provided by the state for Grade 3, many Grade 3 students were identified as needing accelerated reading instruction.¹

In contrast, Grade 4 students, in different immediate circumstances (i.e., not facing the TAKS reading component for grade advancement), may not have been focused on as intensely as those in Grade 3. Another plausible explanation for the lower percentage of Grade 4 students identified as struggling in reading is that they are more likely to be on-grade level as a result of all the reading attention they received during the previous year in order to meet the TAKS passing requirement. Nevertheless, because of the focus that Grades K-4 had received in previous years, TEA recommended that Grade 3-5 students should receive instructional priority in 2004-2005.

Struggling Readers Served by the ARI Program

Upon having identified students who require accelerated instruction, districts had discretion to determine how they would coordinate funds for the instruction. As previously noted, some districts used other funding streams to supplement ARI/AMI funding. ARI and AMI funding is intended to supplement, not supplant, such funding.

LEAs also had discretion to distribute the ARI/AMI funds as they deemed necessary between math and reading to best meet their students' needs.

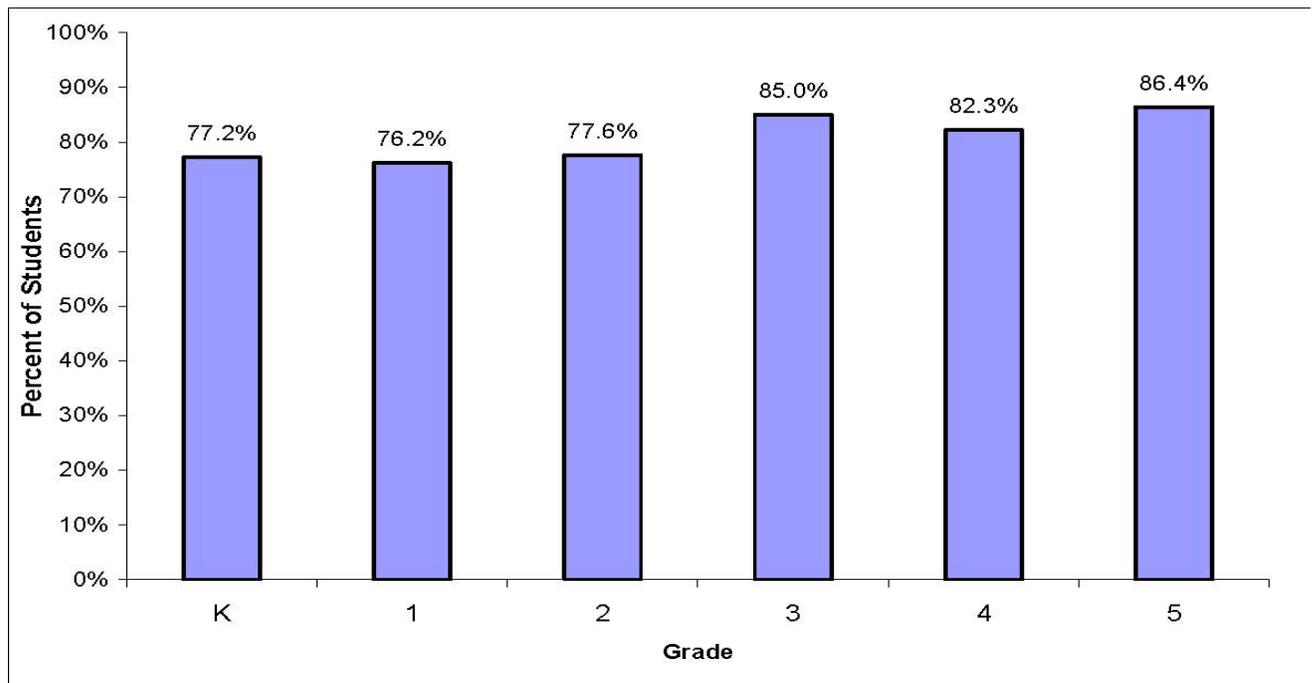
The total number of students served by the ARI program in 2004-2005 ranged from 58,951 Kindergarten students to 88,709 Grade 3 students (Table 3). Figure 2 illustrates that the vast majority (76% to 86%) of the students identified as struggling in reading were served at least in part through the ARI program. A higher percentage of Grade 3-5 students were served compared to Grade K-2 students, consistent with the ARI program guideline that the needs of Grade 3-5 students should be a priority in 2004-2005, as discussed above.

Combining Grades K-5, 81% (448,382 out of 555,722) of the students identified as struggling readers were served at least in part through the ARI program, 14% were served exclusively through funds other than ARI, and the other 5%

¹ The ERI diagnostic tests provided by the state at no charge apply to grades K to 2; other diagnostic tools are commercially available to LEAs and may target other grades.

either left the district or were otherwise unavailable for accelerated reading services. Clearly, ARI funding plays an important part in the provision of SSI-mandated accelerated instruction for students not reading at grade level.

Figure 2: Percent of Students Identified as Struggling in Reading Who Were Served by the ARI Program, 2004-2005 School Year



Source: ARI/AMI Final Evaluation Reports, Texas Education Agency, 2004-2005.

Students Identified as Struggling in Math

Nearly 439,000 students were identified as struggling mathematics learners during the 2004-2005 school year and approximately 82% of these students were served through the AMI program. Students in Kindergarten through Grade 5 identified as struggling in math ranged from a low of 51,158 Grade 1 students to 90,873 Grade 5 students (Table 4).

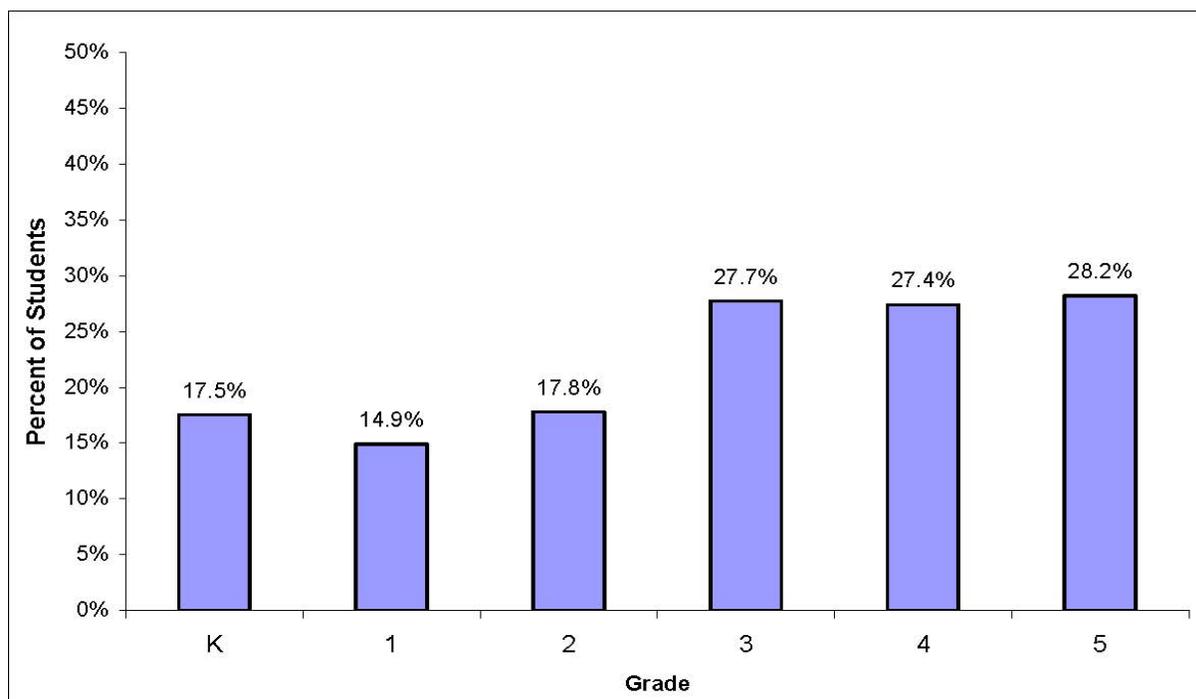
Table 4: Number of Students Identified as Struggling in Math and Served by the AMI Program, 2004-2005 School Year

	Grade						
	K	1	2	3	4	5	Total
Number of Students Identified for AMI Program	58,166	51,158	59,446	90,364	88,555	90,873	438,562
Number of Students Served by AMI Program	48,808	40,390	45,728	75,057	72,607	78,921	361,511
Percent of Identified Students Served	83.9%	79.0%	76.9%	83.1%	82.0%	86.8%	82.4%

Source: ARI/AMI Final Evaluation Reports, Texas Education Agency, 2004-2005.

The number of students identified as being in need of accelerated math instruction as a percentage of total students enrolled for each grade ranged from 15% in Grade 1 to 28% in Grade 5 (Figure 3).

Figure 3: Percent of Students Enrolled who were Identified as Struggling in Math, 2004-2005 School Year



Source: ARI/AMI Final Evaluation Reports, Texas Education Agency, 2004-2005.

The differences in the percentages of students identified as needing accelerated math instruction compared to those identified as needing accelerated reading instruction are evident. In Grades K to 3 the percentages of students

identified as struggling in reading all exceed the percentages of students identified as struggling in math. The differences ranged from 16% for Grade 1 to 4% for Grade 3. As Figures 1 and 3 show, however, the difference is reversed for Grades 4 and 5. For these two grades, a greater percentage of students enrolled were identified as struggling in math versus those identified as struggling in reading (27% vs. 24% for Grade 4, and 28% vs. 27% for Grade 5).

The method of assessment might be one explanation for the differences in the percentages of students needing accelerated math instruction compared to those identified as needing accelerated reading instruction across Grades K-5. It was recommended that districts/charters use instruments from the 2004-2005 Commissioner's List of Reading Instruments to identify students needing early reading intervention in Grades K-2, and alternate math diagnostic assessments to identify students needing accelerated instruction in math. A more uniform and commonly known list of reading assessment tools is one plausible explanation for why there were higher percentages of Grades K-2 students identified for the ARI program than the AMI program. This pattern holds for Grade 3 students, and it could be attributed to an increased emphasis on the ARI program due to upcoming TAKS reading requirement for grade placement, as noted earlier.

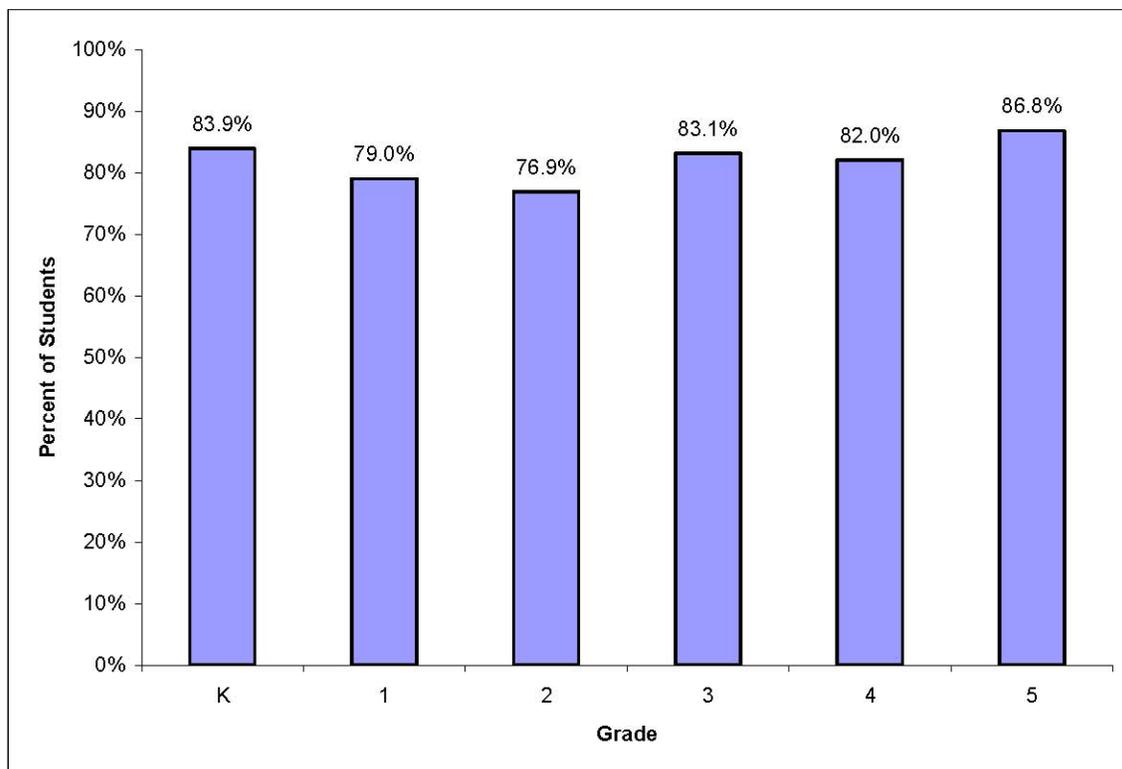
For Grades 4 and 5, the pattern changes to show slightly higher percentages of Grade 4-5 students identified as struggling in math than in reading. This might be attributable to the recommendation that the Texas Math Diagnostic System be used for Grade 4-5 students. Furthermore, a math diagnostic test similar to the various early reading assessments is not available for the early grades. It seems plausible to conclude that, in the absence of a math diagnostic similar to early reading diagnostics, identification of students struggling in math is easier for the three grades that administer TAKS testing in the subject (Grades 3-5) than it is for the three grades that do not administer TAKS (Grades K-2).

Students Served by the AMI Program

In 2004-2005, the total number of students served by the AMI program ranged from 40,390 in Grade 1 to 78,921 in Grade 5 (Table 4). Figure 4 shows the proportion of the students identified as struggling that were served at least in part through AMI funding. Similar to the numbers for ARI, the differences in the percentages of students identified as struggling in math and served with AMI funding ranged from 77% of Grade 2 students to 87% of Grade 5 students.

Combining Grades K-5 together, 82% (361,511 out of 438,562) of the students identified as struggling in math were served at least in part through the AMI program, 12% were served exclusively through funds other than AMI, and the other 6% either left the district or were otherwise unavailable for accelerated math services. Similar to ARI results, AMI funding also plays an important part in the provision of SSI mandated accelerated instruction for students with math skills below grade level.

Figure 4: Percent of Students Identified as Struggling in Math Served by AMI Program, 2004-2005 School Year



Source: ARI/AMI Final Evaluation Reports, Texas Education Agency, 2004-2005.

As the ARI/AMI program has expanded, it has become a vital part of the funding used by LEAs for SSI-mandated accelerated instruction, and funded well over 80% of the services provided to those students who were identified as needing accelerated instruction in math or reading.

Section III: Use of ARI and AMI Funds

This section of the report provides a descriptive overview of how LEAs utilized ARI and AMI program funds for various budget categories (e.g., payroll, supplies and materials, etc.), and provides a detailed account of how program funds were distributed across various instructional grouping strategies (e.g., One-to-One, Small Group, Whole Group) and timing of instruction strategies (e.g., Before School, During School, After School, Summer School).

Overall Distribution of Expenses

The TEA leaves discretion to each LEA to determine exactly how it will fund and structure services provided to each identified student. LEAs may coordinate funding in the manner they choose. Of the \$78.4 million reported on 2004-2005 expenditure reports, 51% of the funding was dedicated to the ARI program and 49% was spent on the AMI program. Expenditure reports submitted to the TEA indicate that the 2004-2005 ARI/AMI funds were used in two major categories - payroll and supplies/materials.

Table 5 and Figure 5 show that over 90% of funding was spent on payroll and supplies/materials; however, the distribution of funds between these two budget categories varies significantly for the reading and math programs. Over half of ARI money was spent on payroll (55.6%), followed by supplies and materials (38.5%).

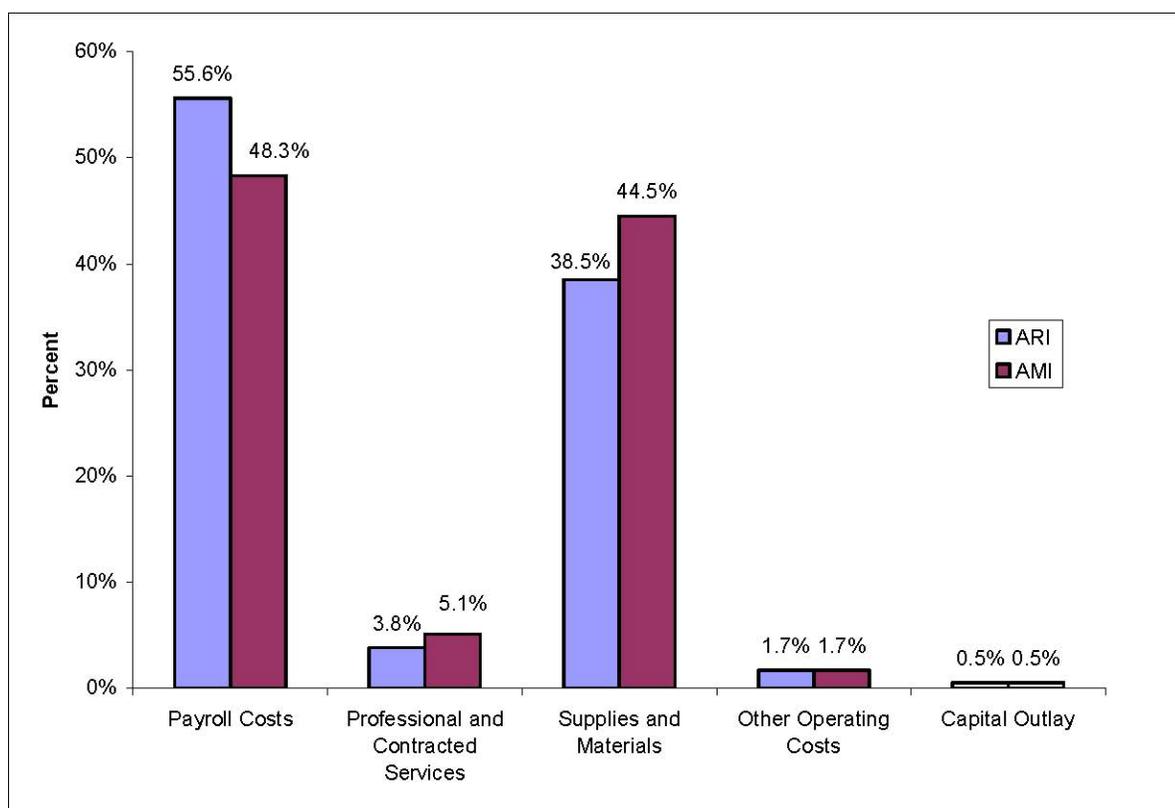
Table 5: Distribution of Expenses by Primary Budget Category - ARI/AMI

Budget Item Category	Program	
	Reading	Math
Payroll Costs	55.6%	48.3%
Professional and Contracted Services	3.8%	5.1%
Supplies and Materials	38.5%	44.5%
Other Operating Costs	1.7%	1.7%
Capital Outlay	0.5%	0.5%
TOTAL	\$39,778,579	\$38,626,950

Source: ARI/AMI Final Evaluation Reports, Texas Education Agency, 2004-2005.

Although AMI funding was largely spent in these same two categories, the percentage spent in these categories is more evenly distributed with 48.3% on payroll and 44.5% spent on supplies/materials.

Figure 5: Distribution of ARI/AMI Expenses, 2004-2005 School Year



Source: ARI/AMI Final Evaluation Reports. Texas Education Agency. 2004-2005.

Table 6 provides a more refined analysis of program expenditures through the use of additional budget subcategories. A large portion of the payroll costs for ARI can be attributed specifically to Teacher Pay. Teacher Pay accounted for 27% of all ARI funds. Tutor Pay accounted for 19% of all ARI expenditures, and Substitute Teacher Pay, Pay for Classroom Aides and Other Payroll Costs accounted for the remaining 10% of payroll-related expenditures. Over a quarter (26%) of ARI fund was spent on Supplemental Curriculum materials, and 11% was spent on Other Supplies and Materials.

Almost a quarter (24%) of AMI fund was spent on Teacher Pay, 7% went for Tutor Pay, and 8% was used to pay substitute teachers, classroom aides and other payroll costs. Twenty-three percent of AMI fund was spent on Supplemental Curriculum mathematics materials, and another 19% went for Other Supplies and Materials (Table 6).

Table 6: Distribution of ARI/AMI Expenses by Detailed Budget Item, 2004-2005 School Year

Budget Category	Program	
	Reading	Math
Payroll Costs		
Teacher Pay	27.0%	23.6%
Tutor Pay	19.1%	16.5%
Substitute Teacher Pay	2.9%	3.0%
Classroom Aides Pay	2.6%	2.2%
Other Payroll Costs	4.0%	3.0%
Professional and Contract Service Costs		
Training Costs	0.6%	0.9%
Consultant Costs	1.5%	1.0%
Other Professional and Contract Service Costs	1.6%	3.2%
Supplies and Materials		
Supplemental Curriculum Costs	25.8%	22.6%
Additional Assessment Materials Costs	1.7%	2.7%
Other Supplies and Materials Costs	11.0%	19.1%
Other Operating Costs		
Stipends	0.1%	0.1%
Other Operation Costs	1.6%	1.6%
Capital Outlay Costs	0.5%	0.5%

Source: ARI/AMI Final Evaluation Reports, Texas Education Agency, 2004-2005.

Table 6 shows how ARI/AMI funds were distributed across budget categories, indicating that about 80% of state appropriations for the ARI/AMI program were spent on four budget categories: Teacher Pay, Tutor Pay, Supplemental Curriculum, and Other Supplies and Materials.

Allocation of Funding by Districts

The previous section reviewed the allocation of expenses across budget items on a statewide basis. That approach weights the expenditure patterns of larger districts, with more dollars allocated to them, more heavily. This section explores the proportion of LEAs that used their funding in various ways (e.g., what percentage of districts spent the largest proportion of their ARI funds on Teacher Pay). The overwhelming majority of the LEAs spent the majority of their ARI funds (85%) and AMI funds (84%) on a single budget item (Table 7). Almost one-third of the LEAs indicated that they had spent all of their funding within a single budget category (30% for ARI and 32% for AMI).

Table 7: Propensity of LEAs to Spend ARI and AMI Funds on a Budget Item, 2004-2005 School Year

Largest Single Budget Item Percentage Category	ARI (N=989)	AMI (N=973)
	Percent of LEAs	
1% to 49% of funding spent on single budget item	50%	50%
50% to 99% of funding spent on single budget item	15%	16%
100% of funding spent on single budget item	30%	32%
Total	100%	100%

Source: ARI/AMI Final Evaluation Reports, Texas Education Agency, 2004-2005.

Table 8 displays the percentages of LEAs that spent the largest proportion of their ARI and AMI funding on a particular budget item. As Table 8 shows, approximately 34% of LEAs spent the largest proportion of their ARI allocation for Teacher Pay, as did a similar percentage of LEAs (30%) with their AMI allocation. This is followed by Supplemental Curriculum Materials, where approximately 21% of LEAs spent the greatest percentage of their ARI funds and 22% spent the greatest percentage of AMI funds. Fifteen percent of the LEAs used the largest percentage of their ARI funds on Other Supplies and Materials, while 18% spent the largest percentage of their AMI funds in this budget category. Approximately 17% of the LEAs spent the largest segment of their ARI and AMI funds on Tutor Pay.

Table 8: Budget Category in Which LEAs Used the Largest Proportion of their ARI and AMI Funds, 2004-2005 School Year

Budget Category	ARI (N=989)	AMI (N=973)
Payroll Costs	Percent of LEAs	
Teacher Pay	33.7%	29.7%
Tutor Pay	17.5%	16.8%
Substitute Teacher Pay	1.4%	1.0%
Classroom Aides Pay	5.8%	5.0%
Other Payroll Costs	0.2%	0.4%
Professional and Contract Service Costs		
Training Costs	0.5%	0.8%
Consultant Costs	0.8%	1.1%
Other Professional and Contract Service Costs	1.8%	1.4%
Supplies and Materials		
Supplemental Curriculum Costs	20.7%	22.0%
Additional Assessment Materials Costs	2.4%	2.3%
Other Supplies and Materials Costs	14.9%	17.8%
Other Operating Costs	0.5%	0.6%
Capital Outlay Costs	0.8%	1.0%
TOTAL	100.0%	99.9%

Source: ARI/AMI Final Evaluation Reports, Texas Education Agency, 2004-2005.

Note: Totals do not sum to 100% due to rounding.

Instructional Grouping and Time of Instruction Strategies

Understanding the teaching and grouping strategies used with ARI/AMI program funding provides further information as to how LEAs are utilizing their funds to provide critical services to students struggling in reading and mathematics.

If districts indicated that money was spent on a given budget item, they were asked to rank the use of budget-item

dollars according to instructional grouping strategy and time of instruction strategy on a scale of 0 to 5:

- 0 = No funds (0%)
- 1 = 1% - 24%
- 2 = 25% - 49%
- 3 = 50% - 74%
- 4 = 75% - 99%
- 5 = All funds (100%)

The three instructional grouping strategies are: One-to-One instruction, Small Group instruction (up to 4 students), and Whole Group instruction. Time of instruction strategies indicates when instruction was provided to struggling students (e.g., Before School, During School, After School, Summer School).

To support the SSI requirements, the Texas Education Code and the commissioner's rules provide LEAs with flexibility to determine on an individual student basis the appropriate form, content and timing of the accelerated instruction. LEAs can use any combination of strategies, either allocating all money to only one strategy or using multiple strategies by allocating different amounts to each. Nevertheless, the SSI requires a 10:1 (or lower) student-to-teacher ratio when providing accelerated instruction to a pull-out group.

Additionally, recommendations regarding both the instructional timing and grouping strategies were provided by TEA in ARI/AMI program guidance. Program guidelines include the following:

- Accelerated instruction should occur immediately after assessment has been made, with frequent monitoring of individual student's progress (emphasizing the provision of services during the regular school day because of its timeliness and effectiveness);
- ARI should involve 30 to 45 additional minutes of targeted reading instruction during the school day with flexible grouping of up to 4 students with 1 adult (emphasizing Small Group instruction); and
- AMI programs may utilize strategies provided by the Texas Mathematics Academy, including pairing learners and individual instruction both during and after class.

Evidence that many of the strategies used by LEAs were consistent with TEA’s recommendations on instructional grouping and time of day is shown in Table 9 and Table 10. As noted earlier, it is typical for LEAs to spend the majority of their ARI and AMI funds on a single budget item, and the most common budget items were Teacher Pay, Supplemental Curriculum, Other Materials, and Tutor Pay. These four budget categories together account for 83% of LEAs when it comes to ARI expenditures and 82% for AMI expenditures. Based on this finding, the subsequent discussion of strategies will be limited to these four budget items.

Instructional Grouping Strategies

Table 9 shows the breakdown of instructional grouping strategies by the four main budget categories. The Small Group instruction strategy was most widely utilized by LEAs for ARI — 81% of LEAs indicated that this was their primary method in their use of Teacher Pay funds, followed by 86% of LEAs in their use of Tutor Pay funds, 67% in their use of Supplemental Curriculum funds, and 67% in their use of Other Supplies and Materials purchased with ARI funds. As Table 9 illustrates, similar results were observed for the AMI program — Small Group instruction was the predominant strategy for all four budget categories selected for this analysis.

For the two budget items reflecting supplies and materials (i.e., Supplemental Curriculum and Other Materials) the percentages of LEAs using Small Group instruction were not as high as those for the payroll budget categories. Also for these same two budget items, a larger percentage of LEAs used the Whole Group instructional methods as the primary strategy (22%-24% for ARI and 27%-25% for AMI) compared to the payroll costs budget categories.

Table 9: Primary ARI/AMI-Funded Instructional Grouping Strategies by Main Budget Categories, 2004-2005 School Year

Budget Item	ARI			AMI		
	One-to-One	Small Group	Whole Group	One-to-One	Small Group	Whole Group
	Percent of LEAs			Percent of LEAs		
Payroll Costs						
Teacher Pay	8%	81%	11%	7%	82%	11%
Tutor Pay	10%	86%	4%	11%	85%	4%
Supplies and Materials						
Supplemental Curriculum	11%	67%	22%	10%	63%	27%
Other Materials	10%	67%	24%	10%	65%	25%

Source: ARI/AMI Final Evaluation Reports, Texas Education Agency, 2004-2005.

Instructional Timing Strategies

Table 10 shows the breakdown of time of instruction strategies for the same four budget items presented in Table 9. Very few LEAs applied ARI and AMI funds to activities occurring Before School (2% or less for all four budget items).

Table 10: Primary ARI/AMI-Funded Instructional Timing Strategies

Budget Item	ARI				AMI			
	Before School	During School	After School	Summer School	Before School	During School	After School	Summer School
	Percent of LEAs				Percent of LEAs			
Payroll Costs								
Teacher Pay	2%	38%	20%	40%	2%	33%	23%	42%
Tutor Pay	2%	41%	43%	14%	2%	39%	45%	14%
Supplies and Materials								
Supplemental Curriculum	1%	60%	22%	17%	1%	61%	21%	17%
Other Materials	2%	59%	21%	19%	1%	60%	20%	18%

Source: ARI/AMI Final Evaluation Reports, Texas Education Agency, 2004-2005.

Differences in the remaining three instructional timing strategies (i.e., During School, After School, and Summer School) are evident when the breakdowns by the four main ARI budget items are considered. Monies for Supplies and Materials were used more for regular school day instruction (60% and 59%) compared to Payroll Costs (38% and 41%). Similar results are observed for AMI funds. About 60% of LEAs that spent the largest proportion of their ARI/AMI funding for Supplemental Curriculum or Other Materials used this money primarily to fund activities that

occurred during the regular school day (Table 10).

Thirty-eight percent of LEAs who spent ARI money on Teacher Pay used it for instruction during the regular school day, 40% for Summer School and 20% for After-School instruction. A similar usage pattern applied for the AMI Teacher Pay budget item — During School and Summer School were the top two timing strategies in which LEAs spent the largest proportion of their AMI funding. In contrast with Teacher Pay, During School and After School were the top two timing strategies in which LEAs spent the largest proportion of their ARI/AMI funding on the Tutor Pay budget item.

Section IV: Student Testing and ARI/AMI Outcomes

This section of the report provides detailed information about how struggling readers and math learners fared after receiving accelerated instruction through the ARI/AMI program. At the end of this section, data reported on the ERI section of the CRI Report, and data on how students fared on the TPRI diagnostic test are presented. It is important to note that the ERI data reported in this section includes all students tested with TPRI, regardless of whether they received accelerated instruction through the ARI program.

Performance Outcomes for Students Served by the ARI/AMI Program

Reading

Table 11 shows how students who were identified as struggling in reading and/or math at the beginning of the year fared in these subject areas by the end of the school year. Overall for ARI students in Grades K-5, 63% who were provided accelerated instruction with ARI funds were reading on grade level by the end of the year. There was variation by grade level:

- Kindergarten, 63%;
- Grade 1, 57%;
- Grade 2, 57%;
- Grade 3, 72%;
- Grade 4, 63%; and

- Grade 5, 63%.

The fact that a larger proportion of ARI students in Grade 3 improved their reading skills to be on grade level by the end of the school year likely indicates that greater emphasis was placed on students in this grade due to grade promotion requirements associated with the Grade 3 TAKS reading test.

Mathematics

Compared to ARI students, a slightly larger proportion of AMI students who were provided accelerated instruction in math were on level by the end of the year. For all AMI students in Grades K-5, 68% who were provided with accelerated math instruction were on grade level by the end of the school year. Unlike reading, Grade 3 students did not fare the best — 69% of students in Grade 3 receiving AMI-funded accelerated instruction were on level by the end of the year compared to 73% of Kindergarten students (Table 11).

Table 11: Percent of ARI/AMI Students on Grade Level at the End of the Year, 2004-2005 School Year

	Kinder- garten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Total
Number of Students Served by ARI	58,951	82,101	80,213	88,709	62,399	76,009	448,382
Number of ARI Students Reading on Grade Level at the End of Year	37,285	46,753	45,481	63,855	39,492	47,638	280,504
Percent of ARI Students Served Reading on Grade Level by End of Year	63.2%	56.9%	56.7%	72.0%	63.3%	62.7%	62.6%
Number of Students Served by AMI	48,808	40,390	45,728	75,057	72,607	78,921	361,511
Number of AMI Students on Grade Level in Math by End of Year	35,578	26,028	29,360	51,629	48,114	54,173	244,882
Percent of AMI Students Served on Grade Level in Math by End of Year	72.9%	64.4%	64.2%	68.8%	66.3%	68.6%	67.7%

Source: Early Reading Instrument Report, Texas Education Agency, 2004-2005.

Student Testing: Texas Primary Reading Inventory/Tejas LEE²

While students may be identified as needing accelerated instruction through any of the early reading instruments on the Commissioner’s approved list, the Texas Primary Reading Inventory (TPRI) and its Spanish equivalent, the Tejas LEE, are by far the most commonly used assessment instruments. As part of the SSI, the TEA provides TPRI materials to all LEAs that request it free of charge. This early reading instrument is a diagnostic test used to identify children who are struggling with important reading concepts. The test is administered to Kindergarten students at the middle and end of the school year, and to students in Grades 1 and 2 at the beginning and end of the school year. More than 80% of students tested were administered one of these two instruments (Table 12).

Table 12: Distribution of Early Reading Instrument Testing Used During the 2004-2005 School Year

Instrument	K-Mid	K-End	Grade 1- Beg	Grade 1- End	Grade 2- Beg	Grade 2- End
Texas Primary Reading Inventory (TPRI)	73.9%	74.2%	73.3%	74.7%	76.5%	73.9%
Tejas LEE Revised 2004-2006	12.7%	12.8%	11.7%	11.6%	9.9%	11.2%
Other	13.3%	13.0%	15.1%	13.7%	13.5%	14.8%
Total Number of Students Tested	328,856	330,429	342,413	341,376	324,950	281,824

Source: Early Reading Instrument Report, Texas Education Agency, 2004-2005.

The initial part of the TPRI is a screening process designed to assess those children who have a good command of essential reading concepts pertinent to their grade level. These children are identified as “Developed on Screen” (DOS). Children who are found to have difficulty with essential reading concepts are termed “Still Developing” and are inventoried at greater depth in those areas where they were found to be struggling. These children are identified as needing accelerated reading instruction.

Table 13 shows the change in the number and percent of Grade K-2 students identified as DOS from the first time the TPRI test was taken to the second time the test was taken. Grade 1 students experienced a higher rate of improvement than did Kindergarten students. An increase of 6 percentage points in the number of Kindergarten children identified

² Data reported in this section of the report refer to all students tested in reading, not just those served through the ARI/AMI Program.

as DOS (77% DOS at the mid-year test compared to 83% DOS at the end of the year test). By contrast, the change in the percentage of Grade 1 students tested who were identified as DOS was 15 percentage points, increasing from 61% of those tested at the beginning of the year to 76% of those tested at the end of the year.

Interestingly, the smaller percentage of Kindergarten students who were Still Developing (17%), compared to the percentage of Grade 1 students Still Developing (25%) is consistent with the pattern found in Figure 1 (the percentage of students enrolled who were identified as requiring accelerated reading instruction). This holds true even though not all students enrolled were tested with an early reading instrument, and even though the data depicted in Table 13 is based on the subset of students tested with the TPRI.

Table 13: Students developed on Screen and Tested with TPRI, 2004-2005 School Year

	K-Mid	K-End	Grade 1- Beg	Grade 1- End	Grade 2- Beg
Number of Students Identified as DOS	186,310	204,287	153,247	192,563	167,183
Number of Students Tested with TPRI	243,102	245,194	250,824	255,058	248,690
Percent of Students Identified as DOS	76.6%	83.3%	61.1%	75.5%	67.2%
Percent of Students Tested that were Still Developing	23.4%	16.7%	38.9%	24.5%	32.8%

Source: Early Reading Instrument Report, Texas Education Agency, 2004-2005.

Note: Because students are not screened at the end of Grade 2, there is no end-of-year Grade 2 data.

Table 13 provides a useful aggregate perspective of all Texas school children who are tested with TPRI. Table 14 provides a more detailed view, and reports on the percentage of LEAs that have increased, decreased, or maintained the proportion of children identified as DOS within their LEA from the time the children were first tested to the time they were tested at the end of the year.

As Table 14 indicates, the majority of LEAs have been successful in increasing the number of children identified as DOS from the first test to the second. About three-quarters (71%) of the LEAs increased the proportion of Kindergarten students identified as DOS by the end of the year. The overwhelming majority (83%) of LEAs reported an increase over the course of the year in the percentage of first grade students identified as DOS.

**Table 14: LEAs Realizing Changes in Proportion of Students Developed on Screen,
2004-2005 School Year**

	Grade	
	K	1
	Percent of LEAs	
LEA Increased the Proportion of Students DOS	71.2%	82.9%
LEA Kept Same Proportion of Students DOS	13.1%	8.3%
LEA Decreased the Proportion of Students DOS	15.7%	8.8%
Number of Districts Reporting	1,023	1,025

Source: Early Reading Instrument Report, Texas Education Agency, 2004-2005.

Note: Because students are not screened at end of Grade 2, there is no data to calculate changes for Grade 2.

Section V: Conclusion

Accelerated instruction is an essential component to assisting students to prepare, not only for the SSI grade advancement requirements, but also for academic success in general. This report outlines the 2004-2005 ARI/AMI program and shows that program funding has been used to provide accelerated instruction to well over 80% of Texas children identified as struggling in reading or math.

The majority of all 2004-2005 ARI/AMI funds were used for payroll costs and for supplies and materials. Over 90% of the money went to these two categories. More specifically, payroll funds were largely used to fund Teacher and Tutor Pay; this was the case for both ARI and AMI programs.

The strategies for instructional grouping (e.g., One-to-One, Small Group, Whole Group) and time of instruction (e.g., Before School, During School, After School, Summer School) indicate consistency with recommendations provided by TEA regarding the most effective instructional strategies. The Small Group method was by far the most commonly utilized strategy.

Both the SSI and TEA recommendations call for immediate intervention upon identifying a child as struggling in math or reading. Instruction during the school day is also recommended by the TEA under the rationale that student attendance in an after-school or extended-year program cannot be mandated if parents choose for their child not to participate. Analysis of LEA expenditure reports reveals that, in fact, for the supplies and materials category, the majority of ARI funds were spent for instruction provided during the day, with smaller percentages of this money going to Summer School or After-School instruction.

This picture is different for payroll costs (i.e., Teacher Pay and Tutor Pay). Teacher Pay was used primarily for services provided during the regular school day and for Summer School instruction. In contrast, Tutor Pay was used primarily for services provided to students during the regular school day and for after-school instruction.

TPRI testing outcomes indicate a general improvement in children who were tested as DOS by the end of the year, with more marked improvements occurring among Grade 1 students. With regard to students who were provided accelerated instruction with ARI/AMI funds, grantee reports show that large percentages of these students identified

as struggling early in the year were evaluated as being on grade level by the end of the school year. Across all grades served by the ARI/AMI program (i.e., K-5), 63% of students who were provided accelerated reading instruction with ARI funds were on grade level in reading by the end of the year. An even higher percentage (68%) of the students provided with accelerated math instruction through the AMI program were on grade level in math by the end of the school year.

In conclusion, LEAs in Texas are using ARI/AMI program funding to promote accelerated instruction that is consistent with the program guidelines. Most importantly, the ARI/AMI program is providing Texas school children in academic need with the instruction necessary to improve performance in reading and math.