The seal of the U.S. Department of Education is a circular emblem. It features a central tree with a globe as its base, surrounded by a laurel wreath. The tree is set against a background of a shield with a scale of justice. The words "DEPARTMENT OF EDUCATION" are written in a circular path around the top, and "UNITED STATES OF AMERICA" around the bottom. Two stars are positioned on the left and right sides of the seal.

U.S. DEPARTMENT OF EDUCATION

**Evaluation of the Implementation
of the Rural and Low-Income
School Program
Final Report**

Evaluation of the Implementation of the Rural and Low-Income School Program: Final Report

By
Kathleen Magill, Berkeley Policy Associates
Kelly Hallberg, Learning Point Associates
Trisha Hinojosa, Learning Point Associates
Cynthia Reeves, Consultant

For the:
U.S. Department of Education
Office of Planning, Evaluation and Policy Development
Policy and Program Studies Service

2010

This report was prepared for the U.S. Department of Education under Contract No. ED-04-CO-0027-0004. The project monitor was Erica Lee in the Policy and Program Studies Service. The views expressed herein are those of the contractor. No official endorsement by the U.S. Department of Education is intended or should be inferred.

U.S. Department of Education

Arne Duncan
Secretary

Office of Planning, Evaluation and Policy Development

Carmel Martin
Assistant Secretary

Policy and Program Studies Service

Alan L. Ginsburg
Director

June 2010

This report is in the public domain. Authorization to produce it in whole or in part is granted. Although permission to reprint this publication is not necessary, the citation should be: U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service, *Evaluation of the Implementation of the Rural and Low-Income Schools (RLIS) Program: Final Report*, Washington, D.C., 2010.

This report is also available on the Department's Web site at <http://www.ed.gov/about/offices/list/oepd/ppss/reports.html>.

On request, this publication is available in alternative formats, such as Braille, large print, audiotape, or computer diskette. For more information, please contact the Department's Alternate Format Center at 202-260-0852 or 202-260-0818.

Contents

Exhibits	v
Executive Summary	ix
Chapter 1: Introduction and Background.....	1
Scope of This Final Report	2
Evaluation Questions	2
Data Collection and Analysis.....	3
State and District Interview and Document Data	3
State and District Surveys.....	4
District-level Extant Data	5
Chapter 2: State and District Implementation of the RLIS Program	7
Key Findings	7
State and District Implementation of the RLIS Program.....	8
Goals and Priorities.....	8
Uses of RLIS Funds.....	12
RLIS Administrative Processes	17
District Planning and Needs Assessment.....	19
State Guidance and Assistance	21
Perceived Helpfulness of State Technical Assistance	23
Perceptions of Progress in Meeting Goals	26
Chapter 3: Characteristics of RLIS-eligible Districts	32
Key Findings	32
Data Sources	33
Comparison With Other Districts	33
Characteristics of Districts.....	34
District Size.....	34
NCES Locale Designations.....	35
Region of the Country.....	36
Student-Teacher Ratio	38
Levels of Per-Pupil Spending	39
Ethnic and Racial Make-Up of Student Body.....	40
Proportion of Students Who Qualify for Free or Reduced-price Meals	42
Special Populations.....	43
Chapter 4: Student Achievement in RLIS Districts	46
Key Findings	46
AYP Status in RLIS Districts	47
Subgroups for Which AYP was Calculated.....	47
AYP Status.....	49
Longitudinal Modeling of Student Achievement	54
Data Specifications	54
Determination of RLIS Status.....	55
Missing Data	55
Limitations	56

Interpreting Impact Estimates	56
Approach to Modeling Student Achievement.....	57
Mathematics Findings.....	58
Reading Findings	60
Characteristics of RLIS Implementation and Student Achievement	62
Data Specifications	62
Limitations	63
Approach to Modeling	63
Mathematics Findings.....	64
Reading Findings	66
Chapter 5: Conclusions	68
References.....	70
APPENDIX A: SUPPORTING DATA FOR CHAPTER 3	72
APPENDIX B: STUDENT ACHIEVEMENT TECHNICAL APPENDIX	86
APPENDIX C: STATE COORDINATOR INTERVIEW GUIDE.....	112
APPENDIX D: DISTRICT COORDINATOR INTERVIEW GUIDE.....	116
APPENDIX E: RLIS STATE COORDINATOR SURVEY	120
APPENDIX F: RLIS DISTRICT COORDINATOR SURVEY	126

Exhibits

Exhibit 1	Rural and Low-Income School Funding for the Nine Sample States	3
Exhibit 2	State-reported Goals by Focus for RLIS Funds in Addition to Making AYP	10
Exhibit 3	District-reported Goals by Focus for RLIS Funds in Addition to Making AYP	11
Exhibit 4	District Activities Using RLIS Funds by Focus, Reported by States	13
Exhibit 5	District Activities Using RLIS Funds by Focus, Reported by Districts	14
Exhibit 6	District-reported Use of RLIS Funds	15
Exhibit 7	Protocols Eligible Districts Must Follow, by Percent, to Receive RLIS Funds	17
Exhibit 8	State Assistance Provided to RLIS Districts	22
Exhibit 9	Topics of RLIS-related Communications Between States and Districts	22
Exhibit 10	Types of Technical Assistance That States Provide Districts Receiving RLIS Funds	23
Exhibit 11	Topics About Which Districts Reported Communicating with State Education Agencies, by Percent	24
Exhibit 12	District Use of Information or Technical Assistance Provided by the State Education Agency, by Percent	24
Exhibit 13	Helpfulness of Various Forms for State Technical Assistance, by Intensity	25
Exhibit 14	State Assessment of Progress Meeting RLIS Goals, Including Making AYP, by Number of States	26
Exhibit 15	State Assessment of the Contributions of the RLIS Program to Meeting Specific RLIS Goals and Objectives, by Intensity	27
Exhibit 16	District Assessment of Progress Meeting RLIS Goals, Including Making AYP, by Percent of Districts	28
Exhibit 17	District Assessment of the Contributions of the RLIS Program to Meeting Specific RLIS Goals and Objectives, by Intensity	29
Exhibit 18	Mean District Student Population, 2003–04 Through 2006–07	34
Exhibit 19	National Center for Education Statistics Locale Codes, Eligible RLIS Districts, by Number and Percentage, 2006–07	35
Exhibit 20	Regional Distribution of RLIS Districts, 2006–07	36
Exhibit 21	Regional Distribution of U.S. Districts, by Percentage, 2006–07	37
Exhibit 22	Mean Student-Teacher Ratios, U.S. Districts, by Type of District, 2003–04 Through 2006–07	38
Exhibit 23	Average Per-Pupil Spending, U.S. Districts, by Type of District, 2003–04 Through 2006–07	39
Exhibit 24	Ethnic and Racial Make-Up of Student Body, by Percentage and Type of District, 2006–07	41

Exhibit 25 Average Percentage of Students Who Qualify for Free or Reduced-price Meals, by Percentage and Type of District, 2003–04 Through 2006–07	42
Exhibit 26 Average Proportion of Limited English Proficient Students and Students with Individualized Education Programs, by Percentage and Type of District, 2003–04 Through 2006–07.....	44
Exhibit 27 Percentage of RLIS Districts by Number of Student Subgroups for Which AYP Was Calculated, 2007–08.....	48
Exhibit 28 Mathematics Proficiency Status by Ethnic and Racial Group, by Percentage, RLIS Districts, 2007–08.....	49
Exhibit 29 Reading Proficiency Status by Ethnic and Racial Group, by Percentage, RLIS Districts, 2007–08	50
Exhibit 30 Mathematics Proficiency Status by Special Populations, by Percentage, RLIS Districts, 2007–08	51
Exhibit 31 Reading Proficiency Status by Special Populations, by Percentage, RLIS Districts, 2007–08	52
Exhibit 32 Percentage of RLIS Districts Held Accountable for Student Subgroups That Did Not Make AYP for That Subgroup, 2007–08.....	53
Exhibit 33 Data Sources for Achievement Analyses by School Year	55
Exhibit 34 Mathematics Annual Achievement Gains for RLIS Districts, 2002–03 Through 2007–08.....	58
Exhibit 35 Mathematics Annual Achievement Gains for RLIS District, by Number of Years of RLIS Eligibility, 2002–03 Through 2007–08.....	59
Exhibit 36 Reading Annual Achievement Gains for RLIS Districts, 2002–03 Through 2007–08.....	60
Exhibit 37 Reading Annual Achievement Gains for RLIS District, by Number of Years of RLIS Eligibility, 2002–03 Through 2007–08.....	61
Exhibit 38 Mathematics Achievement Associated With Certain RLIS Goals, 2007–08	64
Exhibit 39 Mathematics Achievement Associated With Certain RLIS Activities, 2007–08	65
Exhibit 40 Reading Achievement Associated With Certain RLIS Goals, 2007–08.....	66
Exhibit 41 Reading Achievement Associated With Certain RLIS Activities, 2007–08.....	67
Exhibit A-1 Total Districts in CCD Data Files, 2003–04 Through 2006–07	72
Exhibit A-2 District Student Population, 2003–04 Through 2006–07	73
Exhibit A-3 Comparison of Districts’ Fall Membership and Sum of Grade Level Totals, 2003–04 Through 2004–05.....	74
Exhibit A-4 NCES Locale Codes, RLIS Districts, 2003–04 Through 2006–07	75
Exhibit A-5 NCES Locale Codes, U.S. Districts, 2006–07.....	76

Exhibit A-6 Regional Distribution of RLIS Districts, by Number and Percent, 2003–04 Through 2006–07.....	76
Exhibit A-7 Regional Distribution of U.S. Districts, by Number and Percent, 2006–07	77
Exhibit A-8 Student-Teacher Ratios, RLIS Districts, 2003–04 Through 2006–07	78
Exhibit A-9 Student-Teacher Ratios, U.S. Districts, 2006–07	78
Exhibit A-10 Average Per-Pupil Spending, by Category, RLIS Districts, 2003–04 Through 2006–07.....	79
Exhibit A-11 Average Per-Pupil Spending, by Category, U.S. Districts, 2006–07	79
Exhibit A-12 Average District Per-Pupil Spending by Region, 2006–07	80
Exhibit A-13 Ethnic and Racial Make-up of Student Body, RLIS Districts, 2003–04 Through 2006–07.....	81
Exhibit A-14 Ethnic and Racial Make-up of Student Body, U.S. Districts, 2006–07.....	82
Exhibit A-15 Students Who Qualify for Free or Reduced-price Meals, by Number and Percentage, U.S. Districts, 2003–04 Through 2006–07.....	83
Exhibit A-16 Students Who Are Limited English Proficient, U.S. Districts, by Number and Percentage, 2003–04 Through 2006–07	84
Exhibit A-17 Students With Individualized Education Programs, U.S. Districts, by Number and Percentage, 2003–04 Through 2006–07	85
Exhibit B-1 Mathematics Proficiency Status by Ethnic and Racial Group, RLIS Districts by Number and Percentage, 2007–08.....	86
Exhibit B-2 Reading Proficiency Status by Ethnic and Racial Group, RLIS Districts by Number and Percentage, 2007–08.....	87
Exhibit B-3 Number of Data Points by Subject Area With Data on All Covariates	88
Exhibit B-4 Patterns of Missing Data for RLIS Districts With and Without Proficiency Data in Mathematics, 2002–08.....	89
Exhibit B-5 Patterns of Missing Data for Non-RLIS Rural Districts With and Without Proficiency Data in Mathematics, 2002–08.....	90
Exhibit B-6 Patterns of Missing Data for RLIS Districts With and Without Proficiency Data in Reading, 2002–08	91
Exhibit B-7 Patterns of Missing Data for Non-RLIS Rural Districts With and Without Proficiency Data in Reading, 2002–08	92
Exhibit B-8 Overall Sample Sizes, NCES Codes 6, 7, and 8	93
Exhibit B-9 Results of Modeling Mathematics Achievement Using the <i>Ever-RLIS</i> Indicator Variable.....	97
Exhibit B-10 Results of Modeling Mathematics Achievement Using the <i>Always-RLIS</i> Indicator Variable.....	98

Exhibit B-11 Results of Modeling Mathematics Achievement Using the <i>Changing-RLIS</i> Indicator Variable.....	99
Exhibit B-12 Results of Modeling Reading Achievement Using the <i>Ever-RLIS</i> Indicator Variable.....	100
Exhibit B-13 Results of Modeling Reading Achievement Using the <i>Always-RLIS</i> Indicator Variable.....	101
Exhibit B-14 Results of Modeling Reading Achievement Using the <i>Changing-RLIS</i> Indicator Variable.....	102
Exhibit B-15 Average Mathematics and Reading Proficiency by Group, 2002–08.....	103
Exhibit B-16 Results of Modeling Mathematics Achievement Using Only Those Districts With Six Years of Data.....	104
Exhibit B-17 Results of Modeling Reading Achievement Using Only Those Districts With Six Years of Data.....	105
Exhibit B-18 Average Proficiency for Mathematics and Reading for Non-RLIS and RLIS Districts by Year and Dosage.....	107

Executive Summary

The Rural and Low-Income School (RLIS) program is part of the Rural Education Achievement Program (REAP) that was authorized under Title VI, Part B of the *Elementary and Secondary Act of 1965 (ESEA)*, as amended by the *No Child Left Behind Act of 2001 (NCLB)*. The RLIS program provides additional funds to help rural districts serving low-income students make adequate yearly progress (AYP) as described in Section 1111(b)(2) of the *ESEA*. RLIS funds may be used to support a variety of activities, including teacher recruitment and retention; teacher professional development; support for educational technology; parental involvement activities; activities authorized under the Safe and Drug-Free Schools Program; and activities authorized under Title I, Part A, and Title III of the *ESEA*.

RLIS funds are distributed to state education agencies, which then distribute money to the school districts that meet the following criteria: (a) the district is not eligible for a grant from the Small, Rural School Achievement (SRSA) program, which serves rural school districts that have fewer than 600 students or that serve extremely sparsely populated areas; (b) 20 percent or more of the children ages 5 through 17 served by the district are from families with incomes below the poverty line; and (c) all of the schools included in the district must have a National Center for Education Statistics (NCES) locale code of 6 (small town), 7 (rural), or 8 (rural near an urban area). The RLIS program distributed almost \$86 million to 41 states in the 2009–10 school year. In turn, the states distributed RLIS funds to 1,497 districts. Award amounts in 2009–10 averaged approximately \$57,000 per district and \$29 per pupil in RLIS-funded districts.

This report includes findings from interview and survey data obtained from state and district RLIS coordinators who were selected for the interview or survey samples based on their state or district's receipt of RLIS funds for the 2007–08 school year. It describes state and district implementation of the RLIS program, priorities for RLIS funds, and RLIS district characteristics. It also includes results from an analysis of extant data at the state and district levels on student achievement outcomes from state assessments used for *NCLB* accountability.

Key Findings

- In addition to the primary goal of making AYP, district and state survey respondents reported that RLIS funds were primarily used to purchase educational technology, support teacher professional development, and, in general, support activities authorized under Title I, Part A. Similarly, interviews with district RLIS coordinators and reviews of district documents indicated that districts primarily used RLIS funds for technology hardware and software, teacher pay, and professional development.
- This evaluation did not examine causality and achievement gains cannot be attributed to the RLIS program; however, from the 2002–03 school year to the 2007–08 school year, the rate of academic improvement in mathematics and reading for districts that received RLIS funding was significantly greater than for non-RLIS rural districts. There was no systematic relationship between the number of years a district received RLIS and gains in student achievement.

State and District Implementation of the RLIS Program

To understand how states and school districts use RLIS funds, it is necessary to look first at the goals and priorities the states and the RLIS districts establish for the program, and how they are aligned with overall district needs. The most common goals for district RLIS programs were improving the quality of instruction and improving student achievement in specific subject areas. All nine states in the state interview sample required RLIS districts to engage in a comprehensive planning process to identify local needs, and the majority of district coordinators in the district interview sample reported undertaking such a process to set the goals and priorities for their districts. However, interview and document data showed considerable variation among states and districts with regard to the planning tools they used and the extent to which districts were directed through the planning process.

State and district RLIS staff reported that planning and administrative processes for the RLIS program are, in virtually all instances, integrated into a consolidated planning and application process for federal programs that requires districts to show how they will use the different funding sources to address identified needs and meet student achievement goals. All of the interviewed states provide a considerable amount of training and technical assistance to the districts to provide them with information about the RLIS Program and assist them with the application process. In particular, the states provide the districts with assistance in how to identify their specific needs for improvement and how to focus their use of RLIS funds in ways that support their efforts to improve student achievement outcomes in reading and mathematics and achieve their AYP goals. District coordinators reported receiving regular, knowledgeable and helpful assistance from state RLIS coordinators in developing their applications for RLIS funds.

RLIS coordinators reported that the flexibility of the RLIS program allowed them to use these funds to meet specific needs in their districts. Interviews with these district RLIS coordinators, along with reviews of RLIS-related documents and technical assistance materials obtained from state and district interview respondents, indicated that districts primarily used RLIS funds for teacher pay, educational technology, professional development, and materials. In an online survey of all states and a random sample of districts that received RLIS funds, both state and district survey respondents reported that RLIS funds were used to support activities authorized under Title I, Part A, and to purchase educational technology.

District Characteristics

In addition to investigating the implementation process for the RLIS program, this evaluation provides information on the demographic characteristics of eligible RLIS districts, and compares those characteristics to those of the national average and the average of rural districts that did not qualify for RLIS funds. These analyses found that the characteristics of students in RLIS districts remained relatively stable in the four school years examined, 2003–04 to 2006–07. These characteristics include the following:

- On average, RLIS districts had more students than other rural districts and fewer students than all districts nationally.
- RLIS districts were more concentrated in the South than other rural districts and districts nationally.
- Student-teacher ratios in RLIS districts were slightly lower than in other districts nationally, but slightly higher than in other rural districts.
- Total per-pupil spending in RLIS districts slightly increased between 2003–04 and 2006–07, from \$8,478 to \$9,842 (dollars unadjusted for inflation). However, per-pupil spending remained substantially lower in RLIS districts than in all districts nationally or in other rural districts, indicating the RLIS program is targeting districts as intended.
- Compared with districts nationally, students in RLIS districts were more likely to be white, black, American Indian or Alaskan Native and less likely to be Hispanic, Asian or Pacific Islander. Compared with other rural districts, students in RLIS districts were less likely to be white and more likely to be black or Hispanic.
- RLIS districts served a higher proportion of students who qualified for free or reduced-price meals and a slightly higher proportion of students who had an Individualized Education Program (IEP) compared with districts nationally and non-RLIS rural districts.
- Students in RLIS districts were less likely to be limited English proficient than students nationally but more likely to be limited English proficient than students in non-RLIS rural districts.

Student Achievement

Increasing student achievement and assisting districts in making AYP are primary goals of the RLIS program. To assess the efforts of districts across the country toward achieving these goals, the evaluation examined student achievement in RLIS districts, first, by performing a descriptive analysis of how RLIS districts were faring under the AYP provisions of *NCLB* in the 2007–08 school year; next, by examining trends in student achievement from 2002–03 through 2007–08; and finally, by examining the relationship between student achievement and selected characteristics of RLIS implementation in a sample of RLIS districts.

Overall, 54 percent of RLIS districts met all AYP targets in mathematics and reading in 2007–08. Among racial and ethnic subgroups, RLIS districts had the most difficulty making AYP for the black student subgroup, although the majority of RLIS districts with the minimum number of students made AYP for this group.¹ Among all subgroups, RLIS districts had the most trouble making AYP for students with IEPs.

This evaluation did not examine causality and achievement gains cannot be attributed to the RLIS program; however, the rate of academic improvement in mathematics and reading for districts that received RLIS funding was significantly greater than for non-RLIS rural districts between 2002–03 and 2007–08. While the differences in growth are statistically significant, it is important to note that they are relatively small in size. Annual growth in RLIS districts was 0.03 standardized units higher in mathematics achievement and 0.02 standardized units higher in reading achievement than in non-RLIS district controlling for several district characteristics. There was no systematic relationship between the number of years a district received RLIS and gains in student achievement. All RLIS groups—whether receiving one, two, three, four, five, or six years of RLIS funding—exhibited positive gains relative to non-RLIS districts though not all of these gains were statistically significant.

Exploratory analyses suggest that districts that set RLIS goals to decrease their dropout rates and increase the quality of instruction had significantly higher mathematics achievement than districts that did not set these goals. However, there was no relationship between a reported focus on specific activities and mathematics or reading achievement.

Sources of Data

The evaluation’s findings are based on multiple sources of data. To answer the questions on RLIS program administration, RLIS funding priorities for the districts and states, and technical assistance provided to the states by the districts, the evaluation included in-depth interviews and an analysis of extant state documents in nine of the 39 states that received RLIS funding for the 2007–08 school year and in 43 of 45 randomly selected districts (five districts in each of the nine sampled states, with two non-responses) that received RLIS funding in 2007–08. The state interviews were conducted by telephone during the spring of the 2007–08 school year and the district interviews were conducted by telephone during the late spring–early summer of the 2008–09 school year. The nine states in the sample were those receiving the largest RLIS allocations in 2007–08: It is important to note that these nine states were selected to provide qualitative information about state priorities, program administration, and technical assistance, and were not intended to represent state implementation across the 39 states receiving funding.

RLIS program data files available on the Department’s Web site were used to identify which districts were eligible for RLIS funds. In 28 of the 43 states that had ever received RLIS funding, all RLIS-eligible districts received funding in each year they were eligible. Additionally, the Common Core of Data (CCD), a federal program that annually collects data about all public

¹ Each state sets its own minimum n-size for subgroup reporting.

schools, public school districts and state education agencies in the United States, provided district demographic information.

The evaluation's longitudinal analysis used data from the EDEN-EDFacts data system, which contains student achievement and accountability data mandated in *NCLB*. It therefore includes data on student achievement on state assessments and data on AYP for all districts in the U.S. In 2009, the EDEN-EDFacts data system included achievement data from the 2005–06, 2006–07, and 2007–08 school years. To supplement the EDEN-EDFacts achievement data, the evaluation drew on data collected in the National Longitudinal School-Level Assessment Score Database (NLSLSASD) to gather district achievement data from the 2002–03 through 2004–05 school years. NLSLSASD was a federal effort, which predated the EDEN-EDFacts data system, to collect and refine data from state assessment systems. The CCD data were also used as covariates in modeling the association of receipt of RLIS funds and student achievement. In both the EDEN-EDFacts and NLSLSASD data, the grades assessed and the assessments used vary by state. The analysis used data from all grades in which there were assessment data for all students in reading or mathematics. To account for the fact that the assessments are not comparable from state to state and the grades varied by state, proficiency levels were converted to z-scores to assess the relative ranking of RLIS districts within their state. In addition, both data sources report percent proficient to measure achievement rather than scale scores on an assessment. As a result, the analyses only provide information about achievement around the proficiency cut point, but do not provide information about changes in performance among high- or low-performing students.

Chapter 1: Introduction and Background

The Rural and Low-Income School (RLIS) program is part of the Rural Education Achievement Program (REAP) that was authorized under Title VI, Part B, of the *Elementary and Secondary Act of 1965 (ESEA)*, as amended by the *No Child Left Behind Act of 2001 (NCLB)*. Rural school districts with a high prevalence of students from low-income families in their communities often experience financial disadvantage due to a reduced property tax base, which is foundational in district funding. The RLIS program provides additional funds to help rural districts serving low-income students make adequate yearly progress (AYP) as described in Section 1111(b)(2) of *ESEA*. An additional grant program created under REAP, the Small, Rural School Achievement (SRSA) program, targets school districts that have fewer than 600 students or that serve extremely rural areas.² SRSA funds are provided directly to eligible school districts by the U. S. Department of Education, while RLIS funds are awarded to state education agencies which then distribute the funds to the school districts in their state that are determined by the Department to meet the RLIS eligibility criteria. The RLIS program distributed almost \$86 million to 41 states in the 2009–10 school year. In turn, the states distributed RLIS funds to 1,497 districts. Award amounts in 2009–10 averaged approximately \$57,000 per district and \$29 per pupil in RLIS-funded districts.

To be eligible for RLIS funds, a district must show that:

- The district is not eligible for an SRSA grant;
- Twenty percent or more of the children ages 5 through 17 served by the district are from families with incomes below the poverty line; and
- All of the schools included in the district have a National Center for Education Statistics (NCES) locale code of 6 (small town), 7 (rural), or 8 (rural near an urban area).³

RLIS funds are meant to be flexible and can be used to support a variety of activities, including teacher recruitment and retention; teacher professional development; support for educational technology; parental involvement activities; activities authorized under the Safe and Drug-Free Schools Program; and activities authorized under Title I, Part A, and Title III of *ESEA*.

The findings of this study will provide information to the Department for RLIS program management and improvement. Additionally, these findings will help the Department prepare

² To be eligible to receive SRSA program funds, a district must show that: (a) the district has a total average daily attendance of fewer than 600 students or serves only schools that are located in counties with a population density of fewer than 10 people per square mile; and (b) the district includes only schools that either have a National Center for Education Statistics (NCES) locale code of 7 (rural) or 8 (rural near an urban area) or are located in an area of the state defined as rural by a governmental agency of the state.

³ See Office of Elementary and Secondary Education Web site, Rural Education Achievement Program (REAP), SRSA program eligibility (<http://www.ed.gov/programs/reapsrsa/eligibility.html>) and RLIS Program eligibility (<http://www.ed.gov/programs/reaprlisp/eligibility.html>).

congressionally mandated biennial reports on the RLIS program and its participation in required performance reporting, accountability, and program assessment activities.

Scope of This Final Report

Key purposes of this study are to identify how states and school districts use RLIS program funds, to assess the progress states and districts made toward RLIS program goals, and to gain insights into what factors acted as facilitators and barriers to meeting state RLIS goals.

This final report contains findings based on the following data collections and analyses:

- Extant data at the state and district levels on student achievement outcomes from state assessments used for *NCLB* accountability
- Demographic data for districts eligible for RLIS funding
- Telephone interviews with RLIS coordinators from a sample of nine state education agencies and 43 districts regarding RLIS goals, priorities, and uses of funds
- RLIS-related documents, such as federal grant application instructions and technical assistance guides, obtained from the sampled states and districts
- An online survey of staff members from all states receiving RLIS funding in 2007–08
- An online survey of a random sample of RLIS coordinators from districts receiving RLIS funding in 2007–08
- Summaries of monitoring visits conducted by the U.S. Department of Education with states receiving RLIS funding

Evaluation Questions

This study addresses the following evaluation questions:

1. What are the characteristics of the districts served by the RLIS program in terms of rural location, poverty, race, etc.?
2. What are the achievement trends in RLIS districts compared with other rural districts?
3. What progress have states made toward achieving their RLIS goals?
4. What are states' priorities for districts' use of RLIS grant funds? How do states administer and monitor the program? What guidance and assistance do states provide? How do states enforce the statutory accountability provisions?
5. What goals have districts identified for RLIS in their grant applications? What progress have districts made toward their goals? How have districts actually used RLIS funds?

The interim report for this study contained findings and analyses that addressed evaluation questions 1 and 4. This final report provides updated findings for questions 1 and 4 and findings for questions 2, 3, and 5.

Data Collection and Analysis

State and District Interview and Document Data

To answer the questions on RLIS program administration, RLIS funding priorities for the districts and states, and technical assistance provided by the states to the districts, the evaluation included in-depth interviews and an analysis of extant state documents in nine of the 39 states that received RLIS funding during the 2007–08 school year (the state interviews were conducted by telephone in the spring of the 2007–08 school year) and in 43 of 45 randomly selected districts that received RLIS funding in 2007–08 in those nine states. The district interviews were conducted during the late spring-early summer of the 2008–09 school year. The interview guides that were used for the state and district interviews are in Appendices C and D.

The state interviews were conducted with the RLIS coordinators in the nine states that received the largest RLIS allocations for the 2007–08 school year (see Exhibit 1). Together, these states accounted for 62.4 percent of RLIS funding in 2007–08.⁴

Exhibit 1
Rural and Low-Income School Funding for the Nine Sample States

State	2007–08 Funding	Total Funding From the RLIS Program (2002–03 Through 2008–09)
Texas	\$7,512,087	\$53,231,150
Georgia	\$7,258,669	\$51,295,765
Mississippi	\$7,132,600	\$44,797,744
Louisiana	\$5,902,306	\$34,992,340
Alabama	\$5,769,468	\$36,353,918
Kentucky	\$5,715,636	\$38,405,563
Oklahoma	\$4,711,471	\$30,365,438
North Carolina	\$4,636,868	\$32,967,708
West Virginia	\$3,545,678	\$25,056,972
Total (nine states)	\$52,184,783	\$347,466,598
TOTAL (all states)	\$83,514,292	\$583,057,493

Exhibit reads: The state of Texas received \$7,512,087 in RLIS funding in 2007–08 and a total of \$53,231,150 in RLIS funding from 2002–03 through 2008–09.

Source: U.S. Department of Education, Office of Elementary and Secondary Education, Rural Education Achievement Program (REAP).

⁴ During 2007–08, the RLIS program distributed almost \$85 million to 39 states; states distributed RLIS funds to 1,240 districts (out of the 1,249 districts that were RLIS-eligible), and awards averaged approximately \$67,000 per district and \$33 per pupil. However, until very late in the review process for this report, the RLIS program office believed that 1,238 districts received RLIS funds and 1,247 districts were eligible during 2007–08. Consequently, the analyses and samples in the report are based on 1,247 RLIS-eligible districts during 2007–08.

In 2006–07, the school year on which the RLIS allocations for the 2007–08 school year were based, the nine states selected for this study included 670 RLIS-eligible districts, compared with 617 RLIS districts in the rest of the country. According to program office files, the 670 RLIS-eligible districts served 1,598,804 students, about 61 percent of all students in RLIS districts. Spending and economically disadvantaged populations for RLIS districts in these nine states differ slightly from those of RLIS districts in the rest of the country. In 2006–07, the average per-pupil spending was slightly lower in RLIS-eligible districts in these nine states compared with RLIS districts in the rest of the country, with averages of \$9,350 and \$10,376, respectively. RLIS-eligible districts in the nine states served a higher percentage of students who qualified for free or reduced-price meals than other RLIS-eligible districts, 64 percent compared with 59 percent in 2006–07.

It is important to note that these nine states were selected to provide qualitative information about state priorities, program administration, and technical assistance, and are not intended to represent state implementation across the 39 states receiving funding in the 2006–07 school year.

Interviews were also conducted with district RLIS staff members in a randomly selected sample of five districts in each of the nine sampled states that received RLIS funding in 2007–08. Four interviews were completed in Georgia and North Carolina and five interviews were completed in the other seven states. As with the interviews with state RLIS staff members, it is important to note that these districts were selected to provide qualitative information about RLIS program administration and funding priorities and are not intended to represent implementation of the RLIS program across all districts receiving funding.

A content analysis of interview transcripts, extant documents, and other background information was performed. A coding framework was developed to review all responses together and evaluate each response for possible relationships and for any significant variations. A classification matrix was used to organize extant state and district documents into categories of analysis, which grouped documents within a relational framework.

State and District Surveys

In order to obtain a more representative picture of RLIS priorities and expenditures than could be obtained through the state and district interviews and document review, online surveys were conducted with state RLIS staff members in all 39 states that received RLIS funds in the 2007–08 school year and with a randomly selected sample drawn from the 1,247 districts that were eligible to receive RLIS funds in the 2007–08 school year. Hard copies of the online surveys to which state and district RLIS staff members responded are in Appendices E and F.

The 39 states that were included in the sample were: Alabama, Arkansas, Arizona, California, Colorado, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Massachusetts, Maine, Michigan, Minnesota, Missouri, Mississippi, Montana, North Carolina, North Dakota, Nebraska, New Hampshire, New Mexico, New York, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, Washington, Wisconsin, and West Virginia. Survey responses were received from 37 of the 39 states, a 95 percent response rate; survey responses were not received from Arkansas and Florida. For the

district survey, 689 potential district respondents were randomly selected from among the 1,247 districts that were eligible to receive RLIS funds in the 2007–08 school year. An 84 percent response rate was achieved, for a final sample of 580 district RLIS coordinators.

District-level Extant Data

Analysis of the extant district data for this final report began by descriptively assessing what RLIS districts have looked like over time and by comparing RLIS districts to districts nationally and other rural districts in the country. RLIS program data files available on the Department’s Web site were used to identify which districts were eligible for RLIS funds. In 28 of the 43 states that had ever received RLIS funding, all RLIS-eligible districts received funding in all six years of the program. The Common Core of Data (CCD), a federal program that annually collects data about all public schools, public school districts and state education agencies in the United States, provided district demographic information. The demographic data from the CCD were used to compare RLIS districts descriptively to non-RLIS rural districts and all districts nationally.

The evaluation also sought to model gains in student achievement in RLIS and non-RLIS districts by conducting a longitudinal analysis. The analysis used data from the EDEN-EDFacts data system, which contains student achievement and accountability data mandated in *NCLB*. It therefore includes data on student achievement on state assessments and data on AYP for all districts in the U.S. Student achievement is defined as the percent of students in a district at or above proficiency levels established by the state in reading and mathematics as measured by state assessments. States determine the percent of students in a district that must be at or above proficiency for the district to make AYP each year, with the *NCLB* goal of all students proficient by 2013–14. In 2009, the EDEN-EDFacts data system included achievement data from the 2005–06, 2006–07, and 2007–08 school years.

To supplement the achievement data found in the EDEN-EDFacts system, the evaluation drew on data collected in the National Longitudinal School-Level Assessment Score Database (NLSLSASD). Funded by the U.S. Department of Education, the NLSLSASD contains assessment scores from roughly 90,000 public schools. The evaluation drew on this data system to gather district achievement data from the 2002–03 through 2004–05 school years. The CCD data were also used as covariates in modeling the association of the RLIS program on student achievement.

In both the EDEN-EDFacts and NLSLSASD data, the grades assessed and the assessments used vary by state. The analysis used data from all grades in which there was assessment data for all students in reading or mathematics. To account for the fact that the assessment are not comparable from state to state and the grades varied by state, proficiency levels were converted to z-scores to assess the relative ranking of RLIS districts within their state.

In addition, both data sources report percent proficient to measure achievement rather than scale scores on an assessment. As a result, the analyses only provide information about achievement around the proficiency cut point, but do not provide information about changes in performance among high- or low-performing students.

Chapter 2: State and District Implementation of the RLIS Program

This chapter contains findings on state and district implementation of the RLIS program. The findings are based on the following sources of data:

- Interviews with RLIS state coordinators in the nine states that received the largest RLIS allocations in 2007–08
- Interviews with RLIS coordinators in 43 RLIS-funded districts in the nine states that received the largest RLIS allocations in 2007–08
- Review of RLIS-related documents obtained from the interview states and districts, such as grant application and guidance materials, program data reports, evaluation reports, and technical assistance materials
- A survey of the RLIS state coordinators in the 39 states that received RLIS funding in 2007–08
- A survey of RLIS district coordinators in a random sample of the 1,249 districts that received RLIS funding in 2007–08

This chapter incorporates selected findings from the interim report on state implementation of the RLIS program. The state implementation findings in the interim report were based on the interviews with RLIS coordinators in the nine states that received the largest RLIS allocations in 2007–08 and on reviews of RLIS-related documents obtained from these states. The results of the state coordinator interviews, which were conducted by telephone during the spring of the 2007–08 school year, were used to develop the interview protocol for the district coordinator interviews and the survey instruments for both the state and district surveys.

The district interviews were conducted by telephone during the late spring–early summer of the 2008–09 school year; RLIS-related documents were collected from the districts during that same period. Both the state coordinator survey and the district coordinator survey were conducted during the spring of the 2008–09 school year. The guides used in conducting the state and district interviews, as well as hard copies of the online surveys to which state and district RLIS staff members responded, are in Appendices C–F.

Key Findings

Key findings on state and district implementation of the RLIS program include the following:

- Almost all state and district respondents in the surveys and interviews indicated that they set goals for RLIS funds in addition to making AYP, based on state and local needs.
- When state and district RLIS coordinators were asked to rate the extent to which specified goals were a focus of their RLIS programs—in addition to the primary goal of making AYP—the most common goals reported for district RLIS programs were improving the quality of instruction, improving student achievement in specific subject areas, and addressing issues specific to rural location, such as retaining teachers or providing distance learning opportunities.

- Both district and state survey respondents reported that RLIS funds were primarily used to purchase educational technology, support teacher professional development, and, in general, support activities authorized under Title I, Part A. Similarly, interviews with district RLIS coordinators and reviews of district documents indicated that districts primarily used RLIS funds for technology hardware and software, teacher pay, and professional development.
- All nine interviewed state coordinators, and almost all of the surveyed state coordinators (37 of 39), reported that all eligible districts in their state received RLIS funds.
- In telephone interviews, both state and district RLIS coordinators reported that RLIS goals and priorities are not separate or distinct from the larger goals and priorities of the state or district goals or for those of other federal programs. State and district RLIS coordinators reported that their states and districts viewed the RLIS program less as a separate program and more as a supplemental funding source to help rural schools meet the AYP targets.
- When asked in the district interview about additional comments on the RLIS program, a common response among district coordinators was that the flexibility of the RLIS program allowed them to use these funds to meet specific needs in their districts.
- All nine states in the state interview sample required RLIS districts to engage in a comprehensive planning process to identify local needs, and the majority of district coordinators in the district interview sample reported undertaking such a process to set the goals and priorities for their districts. However, interview and document data showed considerable variation among states and districts with regard to the planning tools they used and the extent to which districts were directed through the planning process.
- A majority of district coordinators interviewed and surveyed reported receiving regular, knowledgeable, and helpful assistance from state RLIS coordinators in developing their applications for RLIS funds.

State and District Implementation of the RLIS Program

Following are the findings from the analyses of state and district implementation of the RLIS program. Included in the discussion of these findings are brief vignettes that provide detailed contextual information obtained from the interviews with district RLIS staff members.

Goals and Priorities

In addition to the primary goal of helping rural school districts make AYP, most RLIS-funded states and districts set additional goals, based on state and local needs, for their RLIS programs.

Almost all state and district respondents in the surveys and interviews indicated that they set goals for RLIS funds in addition to making AYP, based on state and local needs. All nine states in the state interview sample required RLIS districts to engage in a comprehensive planning

process to identify local needs, and the majority of districts in the district interview sample reported undertaking such a process to set the goals and priorities for their district. It is important to note that even in states and districts that reported setting additional goals for the RLIS program, making AYP took priority over any other goals, and districts with schools in school improvement status were required to direct their RLIS funds to helping that school make AYP.⁵

According to state and district survey respondents, interviews with district coordinators, and review of district documents, improving the quality of instruction and increasing student achievement in particular subject areas were the most commonly reported goals for the RLIS program in addition to making AYP.

While recognizing that making AYP is the primary goal for the use of all RLIS funds, state survey respondents were asked to rate the extent to which several specified goals were also a focus for RLIS funds in their state (see Exhibit 2). State survey respondents were most likely to report that increasing student achievement in a particular subject area and improving the quality of instruction in general were a major or moderate focus for RLIS funds. Roughly 97 percent of state respondents identified each of these goals as a major or moderate focus in their state. Addressing issues specific to rural location, such as retaining teachers or providing distance learning opportunities, was a major or moderate focus for 73 percent of the state respondents, while reducing the high school dropout rate a major or moderate focus for 50 percent.

⁵ Section 1111(b)(2) of *ESEA*.

Exhibit 2
State-reported Goals by Focus for RLIS Funds in Addition to Making AYP

	Major Focus	Moderate Focus	Minimal Focus	Not a Focus
Increasing student achievement in a particular subject area (n = 37)	73%	24%	0%	3%
Improving the quality of instruction (n = 36)	53%	44%	0%	3%
Addressing issues specific to rural location, e.g., retaining teachers, providing distance learning opportunities, etc. (n = 36)	42%	31%	17%	11%
Reducing the high school dropout rate (n = 36)	25%	25%	39%	11%
Ensuring that all students will be educated in learning environments that are safe, drug free, and conducive to learning (n = 35)	20%	31%	31%	17%
Improving the ability of English language learners to achieve proficiency in English and reach high academic standards (n = 36)	19%	25%	44%	11%

Exhibit reads: Seventy-three percent of state survey respondents reported that increasing student achievement in a particular subject area was a major focus in their use of RLIS funds.

Note: Items are listed in order of “Major Focus” and “Moderate Focus” combined.

Source: RLIS State Survey.

District survey respondents were also asked to rate the extent to which specified goals were an additional focus of the use of RLIS funds in their district (see Exhibit 3). Their responses were similar to those of the state survey respondents. Improving the quality of instruction in general and increasing student achievement in a particular subject area were the most commonly cited goals for RLIS funds in addition to making AYP, with roughly 94 and 93 percent of respondents respectively identifying these goals as a major or moderate focus in their district. Addressing issues specific to rural location, such as retaining teachers or providing distance learning opportunities, was a major or moderate focus for 67 percent of the district respondents. Reducing the high school dropout rate was more important to district survey respondents than to state survey respondents, with 71 percent of the district respondents identifying this goal as a major or moderate focus for RLIS funds, compared with 50 percent of the state respondents.

Exhibit 3
District-reported Goals by Focus for RLIS Funds in Addition to Making AYP

	Major Focus	Moderate Focus	Minimal Focus	Not a Focus
Improving the quality of instruction (n = 564)	73%	21%	3%	2%
Increasing student achievement in a particular subject area (n = 559)	70%	23%	4%	3%
Reducing the high school dropout rate (n = 561)	38%	33%	16%	13%
Addressing issues specific to rural location, e.g., retaining teachers, providing distance learning opportunities, etc. (n = 557)	36%	31%	15%	17%
Ensuring that all students will be educated in learning environments that are safe, drug free, and conducive to learning (n = 553)	35%	30%	19%	16%
Improving the ability of English language learners to achieve proficiency in English and reach high academic standards (n = 552)	22%	24%	22%	32%

Exhibit reads: Seventy percent of district survey respondents reported that increasing student achievement in a particular area was a major focus of their district’s use of RLIS funds.

Note: Items are listed in order of “Major Focus” and “Moderate Focus” combined.

Source: RLIS District Survey.

In the interviews with district RLIS coordinators, additional information emerged about goals and priorities for RLIS funds. Seventeen of the 43 district coordinators interviewed reported that a priority for their district was increasing student achievement in a particular subject area, with eight reporting that they focused on increasing student achievement in mathematics and reading and four reporting that they focused on increasing achievement in mathematics and science. Four of the 43 district coordinators interviewed reported focusing all of their RLIS funds on improving achievement in one school. Thirteen of the 43 districts reported focusing on improving student achievement in a targeted school level, with 11 of the 13 focusing on middle or high schools. Three districts reported improving high school graduation rates as a priority for RLIS funds. One district coordinator who reported focusing RLIS funds at the middle or high school level explained that their middle and high schools were not Title I schools and therefore did not receive as much federal funding as the elementary schools in the district. The middle and high schools had identified initiatives to improve student achievement but, prior to receiving RLIS funds, could not afford to implement those programs. The RLIS funds were used to fill this gap and support those initiatives.

Uses of RLIS Funds

Districts integrated their RLIS funds into ongoing school improvement activities to help schools meet AYP targets.

A common response from the district coordinators interviewed was that RLIS funds were used to provide supplemental programs and services that were not covered under other federal programs to support school improvement efforts already in place. Districts reported helping schools to meet AYP targets by integrating RLIS funds into ongoing school improvement activities.

The following example demonstrates how one district used RLIS funds to supplement its efforts to improve the quality of instruction districtwide.

Rockcastle County, Ky.

One of the goals of the Rockcastle County Schools was to improve technology and to provide training on the use of technology in instruction. With the implementation of the *Kentucky Education Reform Act* in 1990, money for technology flowed into rural districts. The district supervisor of instruction reported that this money made the district feel wealthier than it had ever been, but soon the district learned that technology was expensive and quickly became outdated. Yet this increase in technology changed the way the district approached school improvement. District leaders shifted their thinking from focusing in broad terms about improvements in reading and math to asking how the district could better use technology to improve its efforts in reading and math. This required training teachers in using technology for instruction. As a rural district that was far from the professional development opportunities available in more urban areas, the district examined ways to bring professional development for teachers to the county. With support from multiple grants, the district remodeled an old bus garage to create a training center. RLIS funds provided money for computers for the center. The district reported that the center was booked almost every day for training activities. The center provided an economical approach to teacher training. It was located near the district office and therefore could be staffed by district personnel. The district saved on the expense of time and travel for teachers by utilizing online training and district and school personnel to deliver training.

Data from state and district surveys, district interviews and document review show that districts used their RLIS funds primarily to purchase educational technology, to support professional development and to support activities authorized under Title I, Part A.

State survey respondents were asked to rate the extent to which certain activities were a focus of the use of RLIS funds in their state (see Exhibit 4). Respondents were most likely to identify purchasing educational technology (92 percent), supporting teacher professional development (90 percent), and supporting activities authorized under Title I, Part A (88 percent), as a major or moderate focus of their RLIS funds.

**Exhibit 4
District Activities Using RLIS Funds by Focus, Reported by States**

	Major Focus	Moderate Focus	Minimal Focus	Not a Focus
Educational technology, including software and hardware (n = 37)	51%	41%	8%	0%
Teacher professional development (n = 37)	49%	41%	11%	0%
Activities authorized under Title I, Part A (n = 35)	54%	34%	6%	6%
Parental involvement activities (n = 36)	17%	42%	25%	17%
Teacher recruitment and retention, including the use of signing bonuses and other financial incentives (n = 37)	22%	32%	24%	22%
Activities authorized under the Safe and Drug-Free School Program (n = 37)	11%	38%	35%	16%
Language instruction for ELL/LEP students (n = 37)	11%	24%	51%	13%

Exhibit reads: Fifty-one percent of state survey respondents reported that educational technology, including software and hardware, was a major focus of RLIS funds in their state.

Note: Items are listed in order of “Major Focus” and “Moderate Focus” combined.

Source: RLIS State Survey.

District survey respondents were also asked to rate the extent to which various activities were a focus in their use of RLIS funds (see Exhibit 5). Respondents were most likely to report using RLIS funds to support activities authorized under Title I, Part A (76 percent), to purchase educational technology, including hardware and software (75 percent), and to support teacher professional development (68 percent). Respondents were least likely to report using RLIS funds to support teacher recruitment and retention, with 62 percent of respondents reporting that this was not a focus on their RLIS spending.

Exhibit 5
District Activities Using RLIS Funds by Focus, Reported by Districts

	Major Focus	Moderate Focus	Minimal Focus	Not a Focus
Activities authorized under Title I, Part A (n = 559)	52%	24%	9%	15%
Educational technology, including software and hardware (n = 565)	52%	23%	12%	14%
Teacher professional development (n = 564)	37%	31%	15%	18%
Parental involvement activities (n = 556)	14%	25%	30%	31%
Activities authorized under the Safe and Drug-Free School Program (n = 553)	15%	21%	24%	40%
Language instruction for ELL/LEP students (n = 552)	12%	20%	22%	46%
Teacher recruitment and retention, including the use of signing bonuses and other financial incentives (n = 556)	9%	10%	19%	62%

Exhibit reads: Fifty-two percent of district survey respondents reported that activities authorized under Title I, Part A, and educational technology were a major focus of their use of RLIS funds.

Note: Items are listed in order of “Major Focus” and “Moderate Focus” combined.

Source: RLIS District Survey.

District interview responses—from the non-randomly-selected sample of 43 districts in the nine sample states—were largely consistent with the state and district survey responses. The district RLIS coordinators interviewed reported that they used RLIS funds primarily for technology hardware and software, teacher pay, and professional development (see Exhibit 6).

Exhibit 6
District-reported Use of RLIS Funds

Use of RLIS Funds	Number of Districts (n=43)
Educational technology	28
Teacher pay	24
Professional development	21
Materials	15
Transportation for after-school program	2

Exhibit reads: Teacher pay is a use of RLIS funds for 24 districts interviewed.

Source: RLIS district coordinator interviews.

The most commonly reported use of district RLIS funds by the 43 district coordinators interviewed was to purchase educational technology: 28 districts reported using funds for hardware, software, or both. Of these 28 districts, 13 reported purchasing computers for classrooms or computer labs, and eight reported purchasing Smart Boards. Other technology equipment purchases included projectors and calculators. Nineteen districts reported using RLIS funds to purchase computer software aimed at improving student achievement. Districts reported using the funds to renew licenses for programs and to purchase new programs. Examples of the types of programs that were purchased included predictive assessments to help teachers monitor the progress of students, subject matter software and programs that included the ability for parents to access information on the academic progress of their children.

Eighteen of the 43 district RLIS coordinators interviewed reported that improving technology was key to helping them to achieve the broader goal of making AYP. District coordinators that reported using RLIS funds to acquire or update technology described technology as a critical component in their school improvement efforts.

The following example illustrates how one district used computer software to help it meet its goal of improving student achievement in reading and math.

Perry County, Miss.

During the first couple of years of RLIS funding, Perry County targeted low-performing schools and districts. During the 2007–08 school year, the district decided to invest its RLIS funds in computer software that would benefit all schools and all students in the district. The district purchased a reading intervention program designed to develop and strengthen students’ memory, attention, processing rate, and sequencing. The program was designed to support existing curriculum, not replace it. The district also purchased a math curriculum software program. Computer labs were then placed in each school and staffed with an instructor and an assistant. Students were scheduled in the lab every day and encouraged to work with these programs at their own pace. The programs monitored the students’ progress and helped teachers target instruction to student needs.

The second most commonly reported category of spending by district coordinators interviewed was pay for personnel who provided supplemental services. Examples include pay for tutors, technology coordinators, parent involvement coordinators, intervention specialists, and counselors.

RLIS Administrative Processes

The vast majority of state survey respondents reported that they use RLIS funds for administrative purposes.

Almost all states (35 of 37) reported that they used some RLIS funds for administrative purposes. Of the 35 states that reported using some funds for administrative purposes, 28 reported that they used 5 percent of state RLIS funds for this, six reported using less than 5 percent, and one did not specify the amount set aside for this use.

The vast majority of state survey respondents and all nine interviewed state coordinators reported that all eligible districts in their state receive RLIS funds.

By statute, states may award subgrants to eligible districts either by formula or competitively. The nine states included in the interview sample allocated RLIS funds by formula to all eligible districts.

Almost all state coordinators (37 of 39) reported that all eligible districts in their state receive RLIS funds. Roughly half of state survey respondents reported that eligible districts must complete a separate RLIS application (see Exhibit 7). Another 41 percent of state survey respondents reported that eligible districts must complete an RLIS application that is a part of a comprehensive district improvement plan or other district application. Only 5 percent of state survey respondents reported that there is no formal process or protocol eligible districts must follow to receive state funds.

Exhibit 7 Protocols Eligible Districts Must Follow, by Percent, to Receive RLIS Funds

	Percent of States (n=37)
A separate RLIS-specific application form or process	51%
An application for RLIS funds that is a part of a comprehensive district improvement plan or other district application for funds	41%
No formal process or protocol; all districts receive all funds for which they are eligible	5%
Other	3%

Exhibit reads: Fifty-one percent of state survey respondents reported that RLIS-eligible districts complete separate RLIS-specific application form or process in order to receive the funds for which they are eligible.

Source: RLIS State Survey.

State survey respondents were asked how they inform districts that they are eligible to receive funds through the RLIS program. E-mail was the most common form of communication cited (62 percent), followed by posting the information on a Web site (54 percent) and sending eligible districts a letter (51 percent).

District RLIS coordinators interviewed reported a variety of district offices assigned to implement the RLIS program.

Of the 43 district coordinators interviewed, 14 reported that their district RLIS program was implemented by a federal programs officer, whose sole responsibility was overseeing the administration of federal programs. Two of the districts reported that their program was administered by a Title I coordinator with similar responsibilities as a federal programs officer. The other 27 districts reported that the RLIS program was administered by district personnel whose responsibilities included more than implementation of federal programs. The titles of those responsible for RLIS administration included superintendent, assistant superintendent, principal, administration assistant, director of districtwide services, director of education support and programs, supervisor of instruction, and director of technology.

Typical of small districts, the majority of administrators interviewed reported that they wear many hats and have a wide range of responsibilities. As illustrated by the example below, job descriptions provided by district RLIS coordinators often included responsibilities that would be covered by three or four positions in a larger district.

Bienville Parish, La.

Tony Hough is the director of instructional support for the Bienville Parish Schools, a school district of approximately 7,400 students. He oversees the district's technology, data management, testing, and accountability programs. As technology coordinator, Hough is responsible for the upkeep of all technology in the district, identifying new technology, and dealing with E-rate. As data management coordinator, he oversees the system's electronic gradebook and transcript system and ensures that teachers are trained in these systems. As accountability and testing coordinator, he is responsible for all state-mandated testing in the district. Without an office of federal programs, when the RLIS program was introduced, the district assigned responsibility for that program to Hough because of the district focus on technology and his role as technology coordinator.

While district coordinators described varying levels of involvement in the process of developing priorities and strategies for the RLIS funds, their primary role was to ensure that the district's RLIS funds were administered properly. All 43 district coordinators interviewed reported working closely with senior administrators and advisory groups in their districts in order to align the district's RLIS spending with its identified goals and priorities, and ensure that the funds were spent in accordance with federal regulations.

Districts reported that the flexibility of the RLIS program allowed them to use the funds effectively to meet the needs of the district.

When asked if they had any additional comments on the RLIS program, the most common response from district coordinators included praise for the flexibility of the program. District coordinators explained that the structure of the program allowed them to easily target the RLIS funds toward the district's top needs in their efforts to improve student achievement.

State and district coordinators reported that RLIS was the last of the federal grants to be allocated, which, for a district close to the poverty threshold for RLIS funding, may affect that district's ability to plan its budget.

Although district budget planning is usually done in the early summer, the notification from ED to the state and thus, from the state to the district, regarding the final RLIS allocations often does not come until after school has started in the fall. When asked if they had any suggestions for improving the RLIS program, district coordinators explained that earlier notification of the RLIS allocations could improve their budget planning. State coordinators also expressed concern about how the timing of the RLIS notification might affect "borderline" districts that may be above the poverty threshold one year but fall below it the next, as such districts would not know their RLIS funding status at the time they put together their annual budgets.

In addition to monitoring the implementation of the RLIS program by the districts in their states, about one-third of state survey respondents reported that they had conducted evaluations of the RLIS program.

Twenty-one of the 43 interviewed districts reported having received a monitoring visit from the state at some point; the time frame for these visits was not specified. District coordinators described the visits as "comprehensive," covering all federal programs. In addition, 12 of the 37 state survey respondents reported that they had evaluated the RLIS program in their state. Of the 12 states that reported having conducted an evaluation, four reported that a report or other document was produced as a part of the evaluation. None of these reports were available online.

District Planning and Needs Assessment

All nine interviewed states required RLIS districts to engage in a comprehensive planning process to identify local needs, and the majority of interviewed districts reported undertaking such a process to set the goals and priorities for their district.

State coordinators in all nine of the interviewed states reported that they viewed the RLIS program as one of several federal funding sources available to help rural, low-income districts reach the goals of improving student achievement and making AYP, and that they encouraged districts to use all available federal funds to coordinate local efforts to achieve these goals. State and district RLIS coordinators did not view the RLIS program as a separate program. In telephone interviews, both state and district RLIS coordinators reported that RLIS goals and priorities are not separate or distinct from the larger goals and priorities of the state or district goals or for those of other federal programs.

All of the interviewed state coordinators reported that their state had a comprehensive planning process that was designed to help districts identify areas of *local* need and select appropriate strategies across funding sources to address those needs. As reported by the state coordinators and verified by state documents, there was considerable variability among the nine states with regard to the planning tools they used and to what extent they directed districts through the planning process. The states' comprehensive planning processes typically included a consolidated application that described how federal funds, including RLIS funds, would be used together to implement and evaluate those strategies. Seven of the nine states used a consolidated application for all federal funds, and four of those used an online application. In the two states that did not use a consolidated application, districts completed individual applications for each federal program, including RLIS. Six of the nine state coordinators interviewed stated that their state developed a needs assessment process or tool to help districts identify their primary needs in relation to improving student achievement. Twenty-five of the 31 districts that reported undertaking a comprehensive needs assessment were in the six states that had developed a process or tool to assist districts in conducting needs assessment.

District interview and document data showed considerable variation among districts with regard to the planning tools they used, the structure of their needs assessment, and the types of data collected. District needs assessments ranged from formal ones—following required guidelines from the state as to the kinds of data collected and the instruments used—to informal conversations with principals about their needs.

District processes for identifying goals and priorities for using RLIS funds reported by district coordinators fell into two categories: Decisions made primarily by the RLIS coordinator or decisions made by a small district advisory team.

The majority of district RLIS coordinators interviewed (31 of 43) reported that their district undertook some kind of comprehensive needs assessment annually and that decisions about the overall goals and priorities of the district—not just decisions related to the RLIS program—were based on that needs assessment. District RLIS coordinators reported varying types of structures for their needs assessments. The most structured processes included surveys of district and school personnel and parents and students. These assessments also included regularly scheduled meetings to analyze and discuss district data. The least structured processes included district coordinators getting input, in a more informal way, from principals about their needs. Involvement in the process also varied from a small group of district administrators (sometimes only one or two) to a more inclusive process that involved district administrators, school personnel, students, parents, and community members. The districts also reported differences in how they used the information from the needs assessment to determine the district's RLIS goals and priorities. Districts in which the RLIS coordinator was the superintendent or a school principal were more likely to make decisions about goals and priorities for the programs themselves or in consultation with one other administrator (nine districts). Other districts relied primarily on a district advisory team to review the information derived from the districtwide needs assessment to identify goals and priorities (five districts). These district advisory teams included such personnel as superintendent, assistant superintendents, chief financial officer, principals, teachers, and curriculum specialists or coaches.

The following example illustrates how one district conducted a needs assessment based on requirements and guidelines from the state.

Harrison County, W.Va.

School districts in West Virginia are required to develop a five-year strategic plan. Included in the plan are the mission and goals of the school system to improve school system performance and progress. The plans are revised annually and must include performance measures and action to be taken to meet each measure.*

Harrison County, like other districts in West Virginia, relies on its five-year strategic plan to determine how funds from various federal programs will be allocated. By state policy, the goals of the plan must focus on improved student achievement. The district's broad data gathering process included data from an array of sources including state tests, end-of-course exams, and ACT and SAT results. Additionally, the district analyzed the overall culture, conditions, and practices of the school system through examination of monitoring reports, questionnaires and observations completed by staff or external evaluators. The district also included an analysis of external trend data (demographic data) in its needs assessment. Harrison County utilized a Curriculum Team and Strategic Planning Committee that included the superintendent, assistant superintendents, administration assistants, and math and literacy coaches to review the data and prioritize strategic issues to develop the five-year strategic plan. Planning for the use of RLIS funds was part of this comprehensive process that drew from a variety of funding sources to support the strategies aimed at meeting district goals for student achievement.

* Source: A Process for Improving Education: Performance Based Accreditation System, Electronic County and School Strategic Improvement Plan Process §126-13-9. 2007.

State Guidance and Assistance

The interviewed district coordinators reported receiving knowledgeable and helpful assistance from state RLIS coordinators in developing their applications for RLIS funds.

Interviewed district coordinators described how state coordinators worked closely with them as needed to develop a proposal that was in line with federal regulations. The majority of districts (30) reported that assistance was provided primarily on an as-needed basis through phone calls and e-mails. Districts also reported receiving guidance and assistance through statewide conferences (18) and regional meetings (5). Thirteen districts reported receiving documents regarding the RLIS program guidelines, and five reported obtaining information about the RLIS program through the state Web site.

District reports confirmed what state coordinators had previously reported in interviews about their provision of guidance and assistance to districts. State coordinators had reported that their directions to districts about RLIS funds ranged from simply restating the federal statute to providing assistance in completing RLIS funding applications and encouraging districts to use RLIS funds to support specific activities, such as professional development or leadership development. Similarly, district coordinators reported that the state coordinators had provided

technical assistance in completing RLIS applications, assisting with goal-setting, identifying effective strategies for using RLIS funds, and assisting with program evaluation (see Exhibit 8).

Exhibit 8
State Assistance Provided to RLIS Districts

Assistance From State	Number of Districts (n=43)
Application	34
Goal setting	27
Program evaluation	12
Identifying effective strategies	11

Exhibit reads: Thirty-four of the 43 districts interviewed reported receiving state assistance with regard to the RLIS application process.

Source: RLIS district coordinator interviews.

All 37 of the state survey respondents reported that they communicated with districts in their state specifically about the RLIS program. State administrators were asked about topics with which they communicated with districts (see Exhibit 9). A vast majority (97 percent) reported communicating with districts about eligibility for RLIS funds, the RLIS application process, and allowable costs. Roughly 68 percent reported providing districts with assistance in developing RLIS activities.

Exhibit 9
Topics of RLIS-related Communications Between States and Districts

	Number of States (n = 37)
Eligibility for RLIS funds	36
RLIS application process	36
Allowable costs	36
Assistance in developing RLIS activities	25
Other	3

Exhibit reads: Thirty-six of 37 state survey respondents reported communicating with districts about eligibility for RLIS funds.

Source: RLIS State Survey.

There was some variation in the frequency with which state survey respondents reported communicating with districts about the RLIS program. Most districts reported that they communicated with districts one or two times a year (43 percent) or monthly or every other month (41 percent). Sixteen percent of districts reported communicating with districts about the RLIS program more often than once a month.

All 37 states responding reported that they provide technical assistance to districts that receive RLIS funds. State survey respondents were most likely to report that information about the RLIS program was available on their Web site (72 percent) and that they provided a district budget review of RLIS fund appropriations (69 percent) (see Exhibit 10).

Exhibit 10
Types of Technical Assistance That
States Provide Districts Receiving RLIS Funds

	Number of States (n = 36)
Information provided on RLIS program on state Web site	26
District budget review of RLIS fund appropriations	25
Checklist on appropriate use of funds	18
Conference or workshop presentations on RLIS program	15
Handbook or guidelines on the appropriate use of RLIS funds	14
Workshops or conference sessions devoted to the receipt of RLIS funds	10
Other	11

Exhibit reads: Twenty-six of the 36 state survey respondents reported that they provided information on their RLIS program on a state Web site.

Source: RLIS State Survey.

Perceived Helpfulness of State Technical Assistance

District coordinators interviewed and surveyed reported receiving regular, knowledgeable, and helpful assistance from state RLIS coordinators in developing their RLIS applications.

In the district survey, approximately 81 percent of survey respondents reported that they communicate with their state education agency specifically about the RLIS program. Among these districts, survey respondents were most likely to report communicating with their state education agencies about allowable costs under the RLIS program (86 percent) (see Exhibit 11).

Exhibit 11
Topics About Which Districts Reported
Communicating with State Education Agencies, by Percent

	Percent of Districts (n = 469)
Allowable costs	86%
RLIS application process	75%
Planning/developing RLIS-funded activities	70%
Eligibility for RLIS funds	67%

Exhibit reads: Eighty-six percent of districts survey respondents reported communicating with their state education agency about eligibility for RLIS funds.

Source: RLIS District Survey.

Among district survey respondents who reported communicating with their state education agencies about the RLIS program, 53 percent reported that this communication occurred rarely, one or two times per year. Five percent reported that this communication occurred more than once every month, with the remainder reporting occasional contact. District survey respondents were also asked to rate the extent to which they have received technical assistance from their state education agency for the RLIS program. Most survey respondents reported that they received a moderate (38 percent) or minimal (36 percent) amount of technical assistance from their state education agency. About 8 percent reported not receiving any technical assistance. District survey respondents that reported that they at least received a minimal amount of technical assistance from the state were asked how this information was used. Respondents were most likely to report that they used assistance or information from the state to learn about or check on the appropriate use of RLIS funds (85 percent) or to complete their RLIS application or comprehensive district plan to receive RLIS funds (83 percent) (see Exhibit 12).

Exhibit 12
District Use of Information or Technical Assistance
Provided by the State Education Agency, by Percent

	Percent of Districts (n = 533)
To learn about/check on appropriate use of funds	85%
To complete our application or comprehensive plan for funds	83%
To identify areas needing attention	35%
To come up with new ideas for spending RLIS funds	32%
Other	2%

Exhibit reads: Eighty-five percent of district survey respondents reported that they used information or technical assistance provided by the state education agency to learn about or check on appropriate use of funds.

Source: RLIS District Survey.

Finally, district survey respondents who reported receiving some technical assistance from the state were asked to rate the helpfulness of various state technical assistance activities. The majority of survey respondents received all of the sources of support about which they were asked (see Exhibit 13). They were least likely to report that the state provided conferences or workshops on the RLIS program or workshops or conference sessions devoted to the receipt of RLIS funds. District survey respondents that received each type of technical assistance generally found them helpful, with only a small fraction of respondents reporting that they received support that they did not find helpful. Respondents were most likely to report that checklists on the appropriate use of RLIS funds were helpful.

Exhibit 13
Helpfulness of Various Forms for State Technical Assistance, by Intensity

	Very Helpful	Moderately helpful	Minimally helpful	Received, not helpful	Did not receive
Handbook or guidelines on the appropriate use of RLIS funds (n = 526)	25%	35%	16%	2%	22%
Conference or workshop presentations on RLIS program (n = 519)	24%	25%	12%	1%	39%
Information provided on RLIS program on state Web site (n = 520)	21%	41%	20%	4%	14%
Checklist on appropriate use of funds (n = 523)	37%	36%	11%	2%	14%
Workshops or conference sessions devoted to the receipt of RLIS funds (n = 514)	22%	22%	11%	4%	42%
District budget review of RLIS fund appropriations (n = 511)	29%	36%	20%	3%	13%

Exhibit reads: Twenty-five percent of district survey respondents reported that they found a handbook or guidance on the appropriate use of RLIS funds very helpful.

Source: RLIS District Survey.

Perceptions of Progress in Meeting Goals

State coordinators were asked to rate their progress toward RLIS goals and objectives, including the goal of making AYP (see Exhibit 14). The majority (78 percent) of the state survey respondents rated their progress toward RLIS goals as moderate. None felt that *no* progress had been made toward RLIS goals.

Exhibit 14
**State Assessment of Progress Meeting RLIS Goals,
Including Making AYP, by Number of States**

	Number of States (n = 37)
Goals and objectives have been accomplished	4
Moderate progress	29
Minimal progress	4
No progress	0

Exhibit reads: Four of the 37 state survey respondents reported that their RLIS goals and objectives had been accomplished, including making AYP.

Source: RLIS State Survey.

State coordinators were then asked to rate the extent to which RLIS funding contributed to their state’s progress toward specific RLIS goals and objectives (see Exhibit 15). State survey respondents were most likely to report that RLIS funds made a moderate or major contribution in making AYP (89 percent), improving the quality of instruction (89 percent), and increasing student achievement in a particular subject area (89 percent).

Exhibit 15
State Assessment of the Contributions of the RLIS Program
to Meeting Specific RLIS Goals and Objectives, by Intensity

	Major Contribution	Moderate Contribution	Minimal Contribution	No Contribution
Making AYP (n = 37)	24%	65%	11%	0%
Improving the quality of instruction (n = 36)	36%	53%	11%	0%
Increasing student achievement in a particular subject (n = 36)	22%	67%	8%	3%
Addressing issues specific to rural location, e.g., retaining teachers, providing distance learning opportunities, etc. (n = 36)	17%	53%	22%	8%
Ensuring that all students will be educated in learning environments that are safe, drug free, and conducive to learning (n = 35)	14%	29%	51%	6%
Reducing the high school dropout rate (n = 36)	8%	31%	56%	6%
Improving the ability of English language learners to achieve proficiency in English and reach high academic standards (n = 35)	9%	23%	57%	11%

Exhibit reads: Twenty-four percent of state survey respondents reported that RLIS funds made a major contribution to their meeting the goal of making AYP.

Source: RLIS State Survey.

District survey respondents were also asked to assess their district’s overall progress toward RLIS goals, including making AYP (see Exhibit 16). Similar to the state survey respondents, the majority of district survey respondents reported that moderate progress has been made toward RLIS goals.

Exhibit 16
**District Assessment of Progress Meeting RLIS Goals,
Including Making AYP, by Percent of Districts**

	Percent of Districts (n = 573)
Goals and objectives have been accomplished	22.0%
Moderate progress	76.0%
Minimal progress	3.0%
No progress	0.2%

Exhibit reads: Twenty-two percent of district survey respondents reported that their RLIS goals and objectives had been accomplished, including making AYP.

Source: RLIS District Survey.

District respondents who reported making at least minimal progress toward RLIS goals were asked to rate the contribution the RLIS program made toward helping them to achieve specific goals and objectives. The RLIS program was seen as making the greatest contribution to making AYP and improving the quality of instruction, with 90 percent of district survey respondents reporting that the RLIS program made a major or moderate contribution to meeting each of these two goals (see Exhibit 17).

Exhibit 17
District Assessment of the Contributions of the RLIS Program to Meeting Specific RLIS Goals and Objectives, by Intensity

	Major Contribution	Moderate Contribution	Minimal Contribution	No Contribution
Making AYP (n = 570)	48%	42%	8%	1%
Improving the quality of instruction (n = 566)	54%	36%	7%	2%
Increasing student achievement in a particular subject (n = 560)	50%	39%	9%	2%
Reducing the high school dropout rate (n = 561)	19%	40%	28%	13%
Addressing issues specific to rural location, e.g., retaining teachers, providing distance learning opportunities, etc. (n = 560)	23%	33%	22%	21%
Ensuring that all students will be educated in learning environments that are safe, drug free, and conducive to learning (n = 557)	23%	31%	26%	21%
Improving the ability of English language learners to achieve proficiency in English and reach high academic standards (n = 559)	13%	25%	27%	34%

Exhibit reads: Forty-eight percent of district survey respondents reported that RLIS funds made a major contribution to their meeting the goal of making AYP.

Source: RLIS District Survey.

The district coordinators interviewed explained that while they believed their district had made progress toward meeting their RLIS goals, it was not possible to attribute that progress completely to the RLIS funded activities, as those activities were part of a broader effort aimed at improving student achievement and making AYP.

Chapter 3: Characteristics of RLIS-eligible Districts

This chapter presents information on the demographic characteristics of eligible RLIS districts⁶ and compares those characteristics to those of the national average and the average of rural districts that did not qualify for RLIS funds. In contrast to Chapter 2, all findings in this chapter draw on data from all RLIS districts across the country. The characteristics of students in RLIS districts remained relatively stable in the four school years examined, 2003–04 to 2006–07.

Key Findings

Key findings on district characteristics include the following:

- On average, RLIS districts tended to have more students than other rural districts and fewer students than all districts nationally.
- RLIS districts were more concentrated in the South than other rural districts and districts nationally.
- Student-teacher ratios in RLIS districts were slightly lower than in other districts nationally but slightly higher than in other rural districts.
- Total per-pupil spending in RLIS districts slightly increased between 2003–04 and 2006–07. However, per-pupil spending remained substantially lower in RLIS districts than in all districts nationally or in other rural districts, indicating the RLIS program is targeting districts as intended.
- Compared with districts nationally, students in RLIS districts were more likely to be white, black, American Indian or Alaskan Native and less likely to be Hispanic, Asian or Pacific Islander. Compared with other rural districts, students in RLIS districts were less likely to be white and more likely to be black or Hispanic.
- RLIS districts served a higher proportion of students who qualified for free or reduced-price meals and a slightly higher proportion of students who had an Individualized Education Program (IEP) compared with districts nationally and non-RLIS rural districts.
- Students in RLIS districts were less likely to be limited English proficient than students nationally but more likely to be limited English proficient than students in non-RLIS rural districts.

⁶ This chapter relies on information provided by the RLIS program office that identifies which districts were eligible to receive RLIS funds in each school year. While there may be some districts that were eligible for the program but did not receive funds, consultations with the program office as well as independent investigation suggest that, with few exceptions, RLIS-eligible districts did, in fact, receive RLIS funds. For this reason, RLIS-eligible is used as a proxy for RLIS-funded districts.

Data Sources

Extant data analyzed in this chapter come from CCD and RLIS program data. The data files covered school years 2003–04 through 2006–07 and included a number of district-level variables regarding student population and performance data. Demographic data were analyzed for RLIS districts for each year of available data. When applicable, demographic data were compared among RLIS districts, all U.S. school districts, and non-RLIS districts with NCES locale codes of 6, 7, or 8. While the data files included a number of common variables used annually by schools and districts, it was necessary to address several data limitations:

- Several districts did not report values for some of the variables. When they did not report information, these districts were not included in the analysis. Exhibit A-1 in Appendix A reports the total number of districts included in the data file for each school year. The number of districts that were missing values for the variables used in specific analyses can be determined by comparing the N reported for the analysis (Exhibits A-2 through A-17) from the appropriate total number of districts reported in Exhibit A-1. For example, in 2004–05, 1,123 RLIS districts reported data on total district population (Exhibit A-2); 1,127 districts are included in the file (Exhibit A-1). Therefore, four RLIS districts were missing data regarding total district population. In addition, for the data concerning economically disadvantaged, limited English proficient, and students with IEPs, only those districts which reported both a count for each special population and a count for total student population variable were included in the analysis.

Comparison With Other Districts

Throughout this section, data on two groups of districts are presented to provide context for interpreting the data on RLIS districts. First, data are presented on non-RLIS rural districts (referred to as non-RLIS and other rural districts). These rural districts (NCES locale code 6, 7, or 8) would not be eligible for the RLIS program for one of two reasons: they are eligible for SRSA or they are serving a district population with fewer than 20 percent of residents below the poverty line.⁷ Second, data are presented on all districts nationally. In 2006–07, approximately 7 percent of districts in the nation qualified for RLIS; similar percentages of districts qualified throughout the 2003–04, 2004–05, and 2005–06 school years. Most of the data in this section are presented graphically. Data tables with additional information on these exhibits, including the number of cases included in each exhibit, can be found in Appendix B.

⁷ In 2006–07, CCD started using a new locale code designation, and information on which districts were a 6, 7, or 8 under the old classification system was not longer available. To draw a comparison non-RLIS rural group in this year, locale code classifications from 2005–06 were used to select the comparison group.

Characteristics of Districts

District Size

The total student population for all district types remained relatively stable from 2003–04 to 2006–07. During this period, RLIS districts had an average reported population of about 2,200 students, smaller than the national average of roughly 3,200 students. However, the average population of RLIS districts was larger than that of non-RLIS rural districts, which enrolled approximately 1,100 students (see Exhibit 18). This difference between the average size of RLIS and non-RLIS rural districts is most likely a result of how the SRSA and RLIS programs determine program eligibility. To qualify to receive SRSA funding, a rural district must serve no more than 600 students or qualify through alternate population density measures. RLIS program eligibility guidelines set no limits on district size but exclude districts that are eligible for SRSA funding. Roughly half of the non-RLIS rural districts qualified for SRSA. With at least half of the non-RLIS rural districts having fewer than 600 students, it stands to reason that the average district size would be lower than that of RLIS districts, which do not include the small districts that are eligible for SRSA funding.

However, it is important to note that, due to the wide ranges of district sizes in subsets, average district sizes should be interpreted with caution, particularly in making comparisons. For example, in 2005–06, reported student population sizes in RLIS districts ranged from 56 to 24,341 students, whereas districts nationwide ranged from 10 or fewer students to as many as 1,014,058 students. Due to the widely varying sizes of districts, average district sizes should be interpreted with caution.

Exhibit 18
Mean District Student Population, 2003–04 Through 2006–07

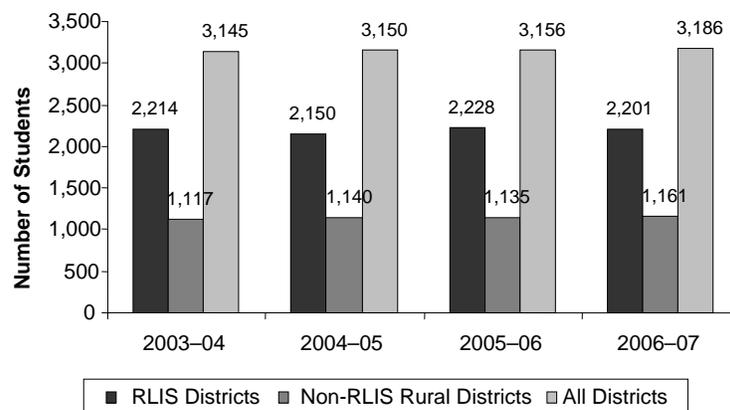


Exhibit reads: In 2003–04, the mean student population in districts that received RLIS funds was 2,214.

Source: Common Core of Data.

NCES Locale Designations

The distribution of RLIS districts across NCES locale codes also remained relatively stable across the years of RLIS implementation (see Exhibit 19). The majority of RLIS districts had a NCES locale code of either 6 or 7, with between 40 and 50 percent of districts falling into each category. About 12 percent of districts reported census locale codes of 8.

Exhibit 19
National Center for Education Statistics Locale Codes,
Eligible RLIS Districts, by Number and Percentage, 2006–07

	2006–07 N=1,286	
	Number of RLIS Districts	Percentage
1-Large City	0	0%
2-Mid-Size City	0	0%
3-Urban Fringe of Large City	1	<1%
4-Urban Fringe of Mid-Size City	0	0%
5-Large Town	1	<1%
6-Small Town	536	42%
7-Rural Outside CBSA/MSA	589	46%
8-Rural Inside CBSA/MSA	159	12%

Exhibit reads: In 2006–07, there were no Rural and Low-Income School (RLIS) districts with an NCES locale code[†] of 1.

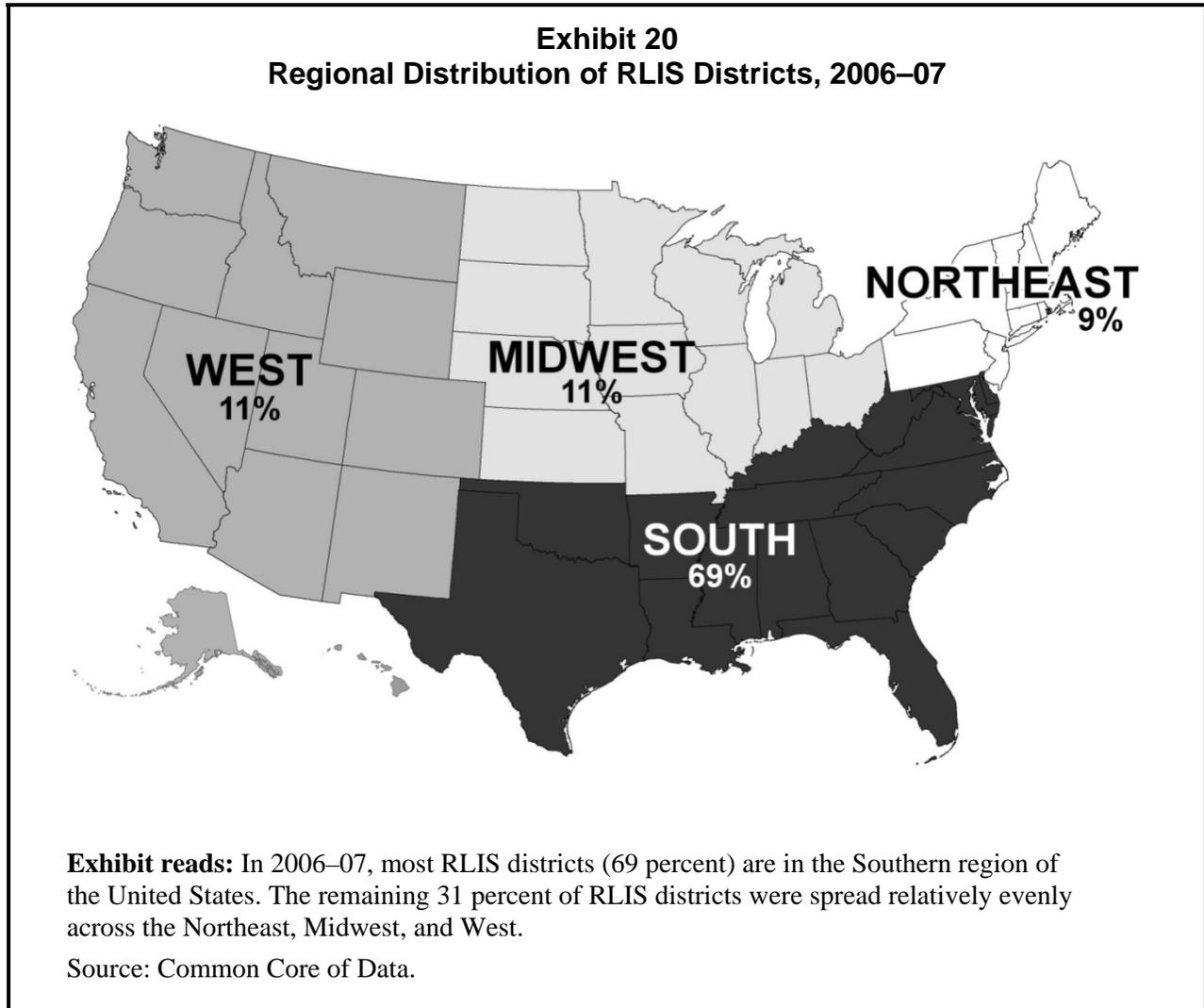
[†] NCES categorizes local education authorities based on data provided by the Census. The locale codes included in this analysis are 6, 7, and 8. NCES locale code 6 is defined as “An incorporated place or Census-designated place with a population less than 25,000 and greater than or equal to 2,500 and located outside a CBSA or MSA.” (CBSA or MSA stands for Core Based Statistical Area or Metropolitan Statistical Area.) NCES locale code 7 is defined as “Any territory designated as rural by the Census Bureau that is outside a CBSA or MSA of a Large or Mid-size City.” NCES locale code 8 is defined as “Any territory designated as rural by the Census Bureau that is within a CBSA or MSA of a Large or Mid-size City.”

Note: As shown in Exhibit 5, two RLIS districts have locale codes other than 6, 7 or 8. According to program staff members, these exceptions are likely the result of an anomaly in how two school districts are assigned locale codes in one state.

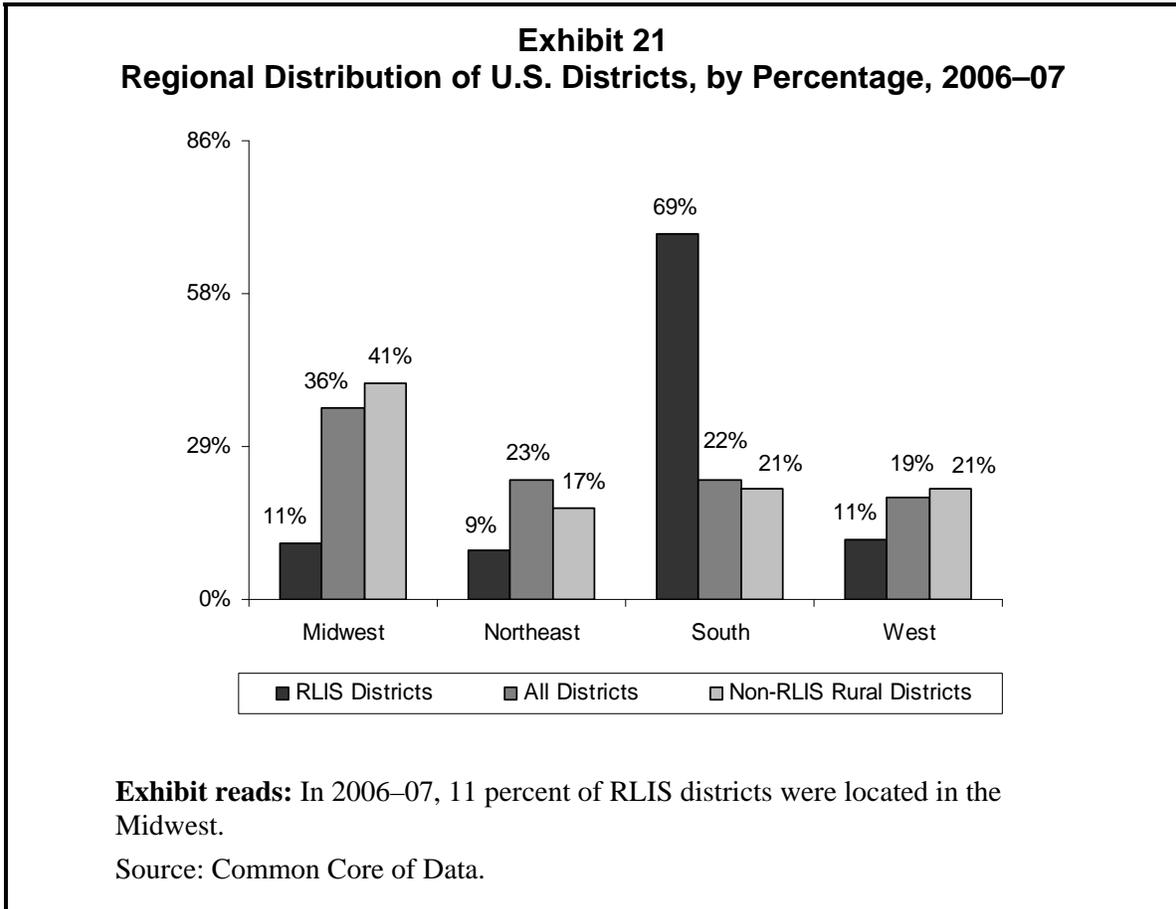
Source: Common Core of Data.

Region of the Country

Across the three school years of data, the distribution of RLIS districts across regions of the country remained relatively stable. In 2006–07, the majority of RLIS districts, about 69 percent, were located in the South. The remaining RLIS districts were distributed roughly evenly across the remaining regions: the West, Midwest, and Northeast (see Exhibit 20).

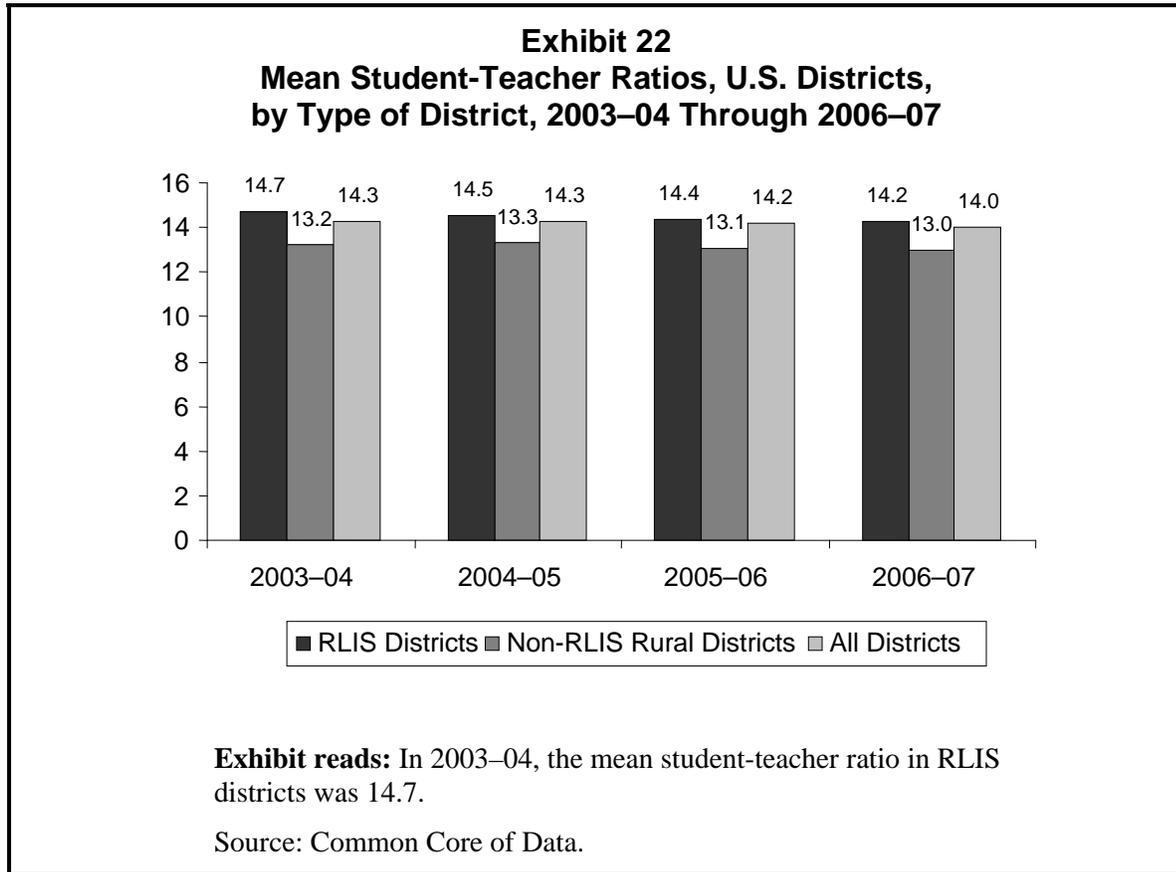


The plurality of U.S. districts overall, about 36 percent, were located in the Midwest. About 20 percent of districts were located in each of the remaining regions. Compared with U.S. districts overall and non-RLIS rural districts, a substantially higher percentage of RLIS districts were located in the South and lower percentages of RLIS districts were located in the remaining regions (see Exhibit 21).



Student-Teacher Ratio

From 2003–04 to 2006–07, average student-teacher ratios in RLIS districts decreased slightly from 14.7 to 14.2 over the four years. In 2006–07, the average student-teacher ratio for RLIS districts (14.0) was similar to that of all U.S. districts (14.2). In contrast, the average ratio for non-RLIS rural districts was 13.0, lower than the averages for both RLIS districts and districts nationally (see Exhibit 22).



Levels of Per-Pupil Spending

Average per-pupil spending increased in RLIS districts between the 2003–04 and the 2006–07 school years, from \$8,435 to \$9,842. In 2004–05, average per-pupil spending in RLIS districts was lower than the average of all U.S. districts and the average of non-RLIS rural districts.⁸ Total expenditures in RLIS districts were just under \$10,000 in 2006–07, compared with more than \$12,000 for the same year in other rural districts and districts nationally (see Exhibit 23). As the RLIS program is intended to help rural school districts that serve students from low-income families, the RLIS program is targeting districts as intended

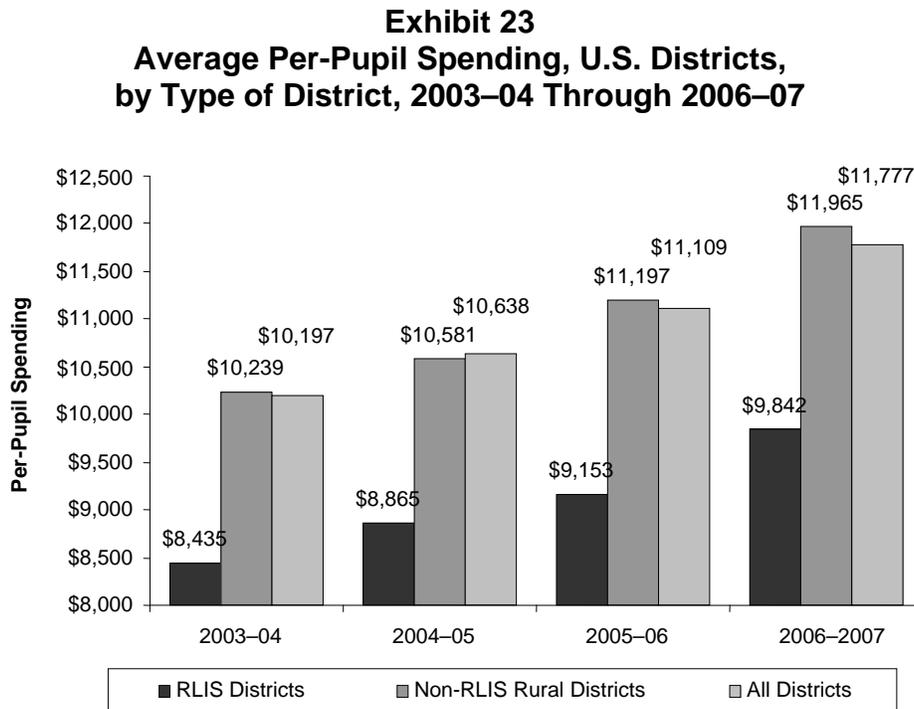


Exhibit reads: In 2003–04, the average per-pupil spending in RLIS districts was \$8,435.

Source: Common Core of Data.

⁸ These differences in per-pupil expenditures are partially explained by the fact that RLIS districts are more likely to be found in the South, where per-pupil expenditures tend to be lower than in the rest of the U.S. In addition, per-pupil expenditures in RLIS districts were lower than those in other districts in each region. Exhibit B-11 and Exhibit B-12 in Appendix B report average per-pupil expenditures by region and district type.

Ethnic and Racial Make-Up of Student Body

From the 2003–04 school year through the 2006–07 school year, the racial composition of RLIS districts remained relatively stable. The majority of students in RLIS districts were white. About one-quarter of students in RLIS districts were black and about one-tenth of students in RLIS districts were Hispanic. Fewer than 5 percent were American Indian and about 1 percent were Asian (see Exhibit A-17).

In RLIS districts, the percentage of students representing certain racial or ethnic groups varied compared with U.S. districts overall and compared with non-RLIS rural districts. In 2006–07, for example, across all three types of districts, the majority of students were white, though RLIS districts reported a higher proportion of black students (23 percent) compared with non-RLIS rural districts (7 percent) and U.S. districts overall (17 percent). There was also a slightly higher proportion of Hispanic students in RLIS districts (11 percent) compared with non-RLIS rural districts (9 percent). However, both RLIS and non-RLIS rural districts had lower proportions of Hispanic students than in U.S. districts overall (22 percent). RLIS districts served a similar percentage of Asian or Pacific Islander students as other rural districts (1 percent) but a lower percentage than U.S. districts overall (5 percent). Conversely, RLIS districts served higher percentages of American Indian or Alaskan Native students (4 percent) than other rural districts (2 percent) and U.S. districts overall (1 percent) (See Exhibit 24).⁹

⁹ An additional category of “Unknown” is included in this analysis to account for discrepancies between counts for racial or ethnic categories and district totals. As previously mentioned, the 2005–06 and 2006–07 files did not include values for total students in the district. Totals were therefore calculated by summing the counts by grade. It was noted that the sum of the racial or ethnic categories was slightly less than the sum of the grades, suggesting there were some students not accounted for in the racial or ethnic categories. Therefore, the “Unknown” category was added to account for these uncategorized students.

Exhibit 24
Ethnic and Racial Make-Up of Student Body,
by Percentage and Type of District, 2006–07

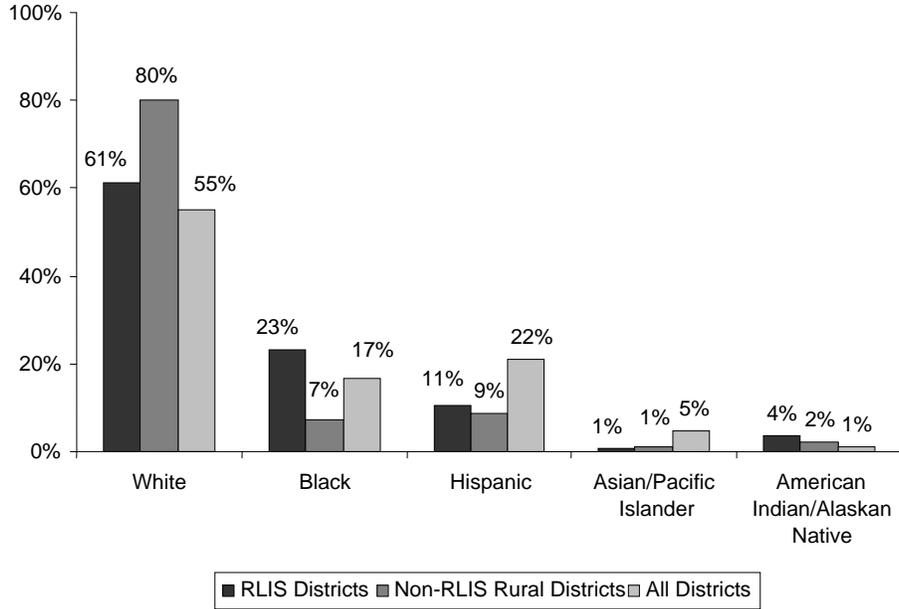


Exhibit reads: In 2006–07, white students constituted an average of 61 percent of the students in RLIS districts.

Source: Common Core of Data.

Proportion of Students Who Qualify for Free or Reduced-price Meals

As expected, RLIS districts overall had a relatively large proportion of students who qualified for free or reduced-price meals, even when compared with the other types of rural districts. More than 60 percent of students in RLIS districts qualified for free or reduced-price meals over the four-year period, with that percentage remaining relatively stable from 2003–04 to 2006–07. Compared with U.S. districts overall and non-RLIS rural districts, higher percentages of students in RLIS districts qualified for free or reduced-price meals. From 2003–04 to 2006–07, the percentage of students that qualified for free or reduced-price meals in other types of districts also remained relatively stable (see Exhibit 25).

Exhibit 25
Average Percentage of Students Who Qualify for Free or Reduced-price Meals, by Percentage and Type of District, 2003–04 Through 2006–07

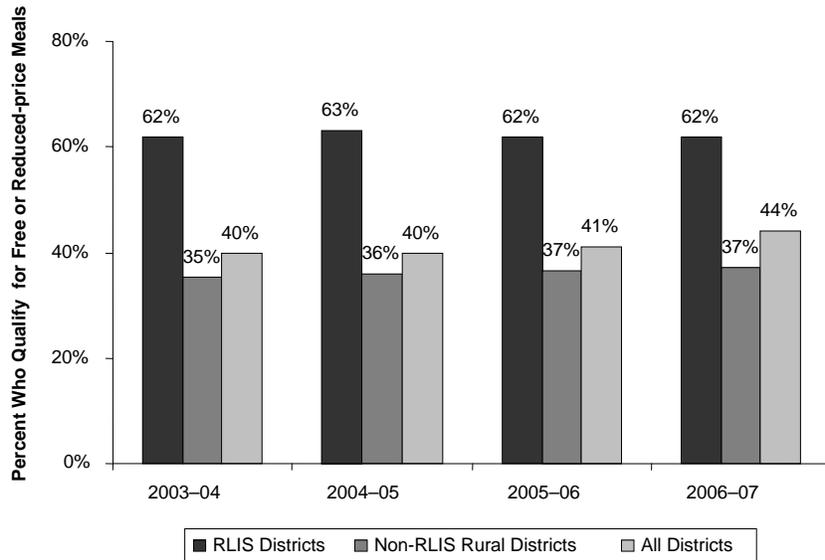


Exhibit reads: In 2003–04, an average of 62 percent of students in RLIS districts qualified for free or reduced-price meals.

Source: Common Core of Data.

Special Populations

Across all four years of data, about 5 percent of students in RLIS districts were identified as limited English proficient (LEP). Compared with RLIS districts, U.S. districts overall had higher percentages of students identified as limited English proficient, although these students still only accounted for about 10 percent of students nationally. In contrast, slightly lower percentages of students in non-RLIS rural districts, about 4 percent, than RLIS districts were identified as limited English proficient (see Exhibit 26).

Across all four years of data, between 13 and 15 percent of students in all three types of districts had an Individualized Education Program (IEP) (see Exhibit 26). These students with disabilities require specialized instruction under the *Individuals with Disabilities Education Act (IDEA)*.

Exhibit 26
Average Proportion of Limited English Proficient Students and
Students with Individualized Education Programs, by Percentage and Type of
District, 2003–04 Through 2006–07

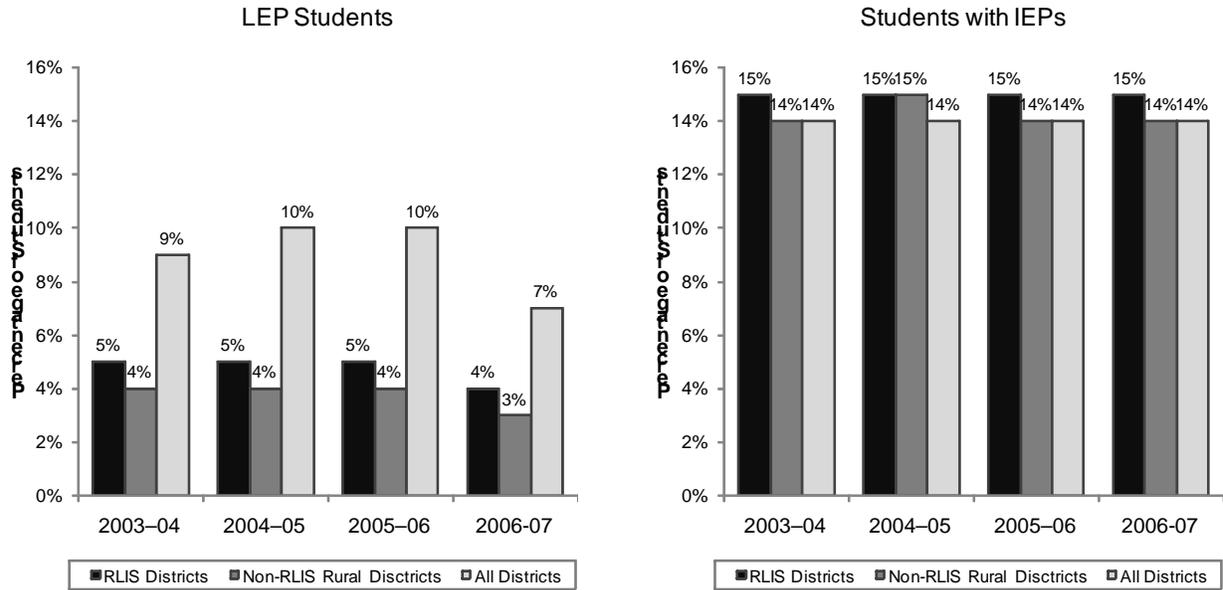


Exhibit reads: In 2003–04, an average of 5 percent of students in RLIS districts were limited English proficient. In that same year, an average of 15 percent of students in RLIS districts had an IEP.

Source: Common Core of Data.

Chapter 4: Student Achievement in RLIS Districts

Increasing student achievement and assisting districts in making AYP are primary goals of the RLIS program. This chapter examines student achievement in RLIS districts. First, a descriptive analysis of how RLIS districts were faring under the AYP provisions of *NCLB* in the 2007–08 school year is provided. Next, trends in student achievement from 2002–03 through 2007–08 are examined, comparing trends in achievement in RLIS districts to trends in non-RLIS rural districts as well as the relationship between trends in student achievement and the number of years a district has received RLIS funds. Finally, in a sample of RLIS districts, the relationship is examined between student achievement and three characteristics of RLIS implementation: (a) priorities guiding district use of RLIS funds; (b) activities implemented using RLIS funds; and (c) district reports of the helpfulness of state technical assistance, activities implemented using RLIS funds.

For each of the analyses presented in this chapter, the data sources used in the analysis are presented first, followed by a brief description of the analytic approach employed and finally, the findings. Additional information about the analytic approach and supporting documentation can be found in Appendix B.

Key Findings

Key findings on student achievement in RLIS districts include the following:

- Overall, 54 percent of RLIS districts reporting data made AYP in 2007–08.
- Among racial and ethnic subgroups, RLIS districts had the most difficulty making AYP for the black student subgroup, although the majority of RLIS districts with the minimum number of black students made AYP for this group.
- Among all subgroups, RLIS districts had the most trouble making AYP for students with Individualized Education Programs (IEPs).
- Analyses suggest that, across the six years, mathematics and reading achievement increased at a faster rate in RLIS districts than in non-RLIS rural districts, controlling for several district-level covariates.
- There was no systematic relationship between the number of years a district received RLIS and gains in student achievement. All RLIS dosage groups—districts receiving one, two, three, four, five, and six years of RLIS funding—exhibited positive gains relative to non-RLIS districts though not all of these gains were statistically significant.
- Exploratory analyses suggest that districts that set RLIS goals to decrease the dropout rate and increase the quality of instruction had significantly higher mathematics achievement than RLIS districts that did not set these goals. However, there was neither a relationship between a reported focus on specific activities and mathematics nor reading

achievement. There was no relationship between any district-identified RLIS goals and reading achievement.

AYP Status in RLIS Districts

This section presents data on the progress of RLIS districts in making AYP during the 2007–08 school year, the most recent year for which data on AYP were available. Extant data for this analysis were drawn from the EDEN-EDFacts data system. For the 2007–08 school year, 93 percent of RLIS districts and 78 percent of all districts reported AYP data. (EDEN-EDFacts is still a relatively new data system, so data were not available for all districts.) Similar to the analyses presented in the previous chapter, several districts did not report values for some of the variables. For the 2007–08 school year, roughly 29 percent of districts submitted data on AYP for *all* subgroups. When they did not report information, these districts were not included in the analyses. Exhibit A-1 in Appendix A reports the total number of districts included in the data file for each school year. The number of districts that were missing values for the variables used in specific analyses can be determined by comparing the N reported for the analysis from the appropriate total number of districts reported in Exhibit A-1.

Subgroups for Which AYP was Calculated

All districts are not held accountable for making AYP for each subgroup under *NCLB*. Each state is responsible for setting a minimum sample size for a subgroup to be included in AYP calculations. This is intended to reduce the chance that a district will be penalized due to statistical error as a result of small sample size as well as respect the privacy of individual students.

In 2007–08, the number of subgroups for which AYP was calculated in RLIS districts ranged from zero to eight. The highest percentages of RLIS districts, a little over 20 percent, had three or four subgroups for which AYP was calculated (see Exhibit 27).

Exhibit 27
Percentage of RLIS Districts by Number of Student Subgroups
for Which AYP Was Calculated, 2007–08

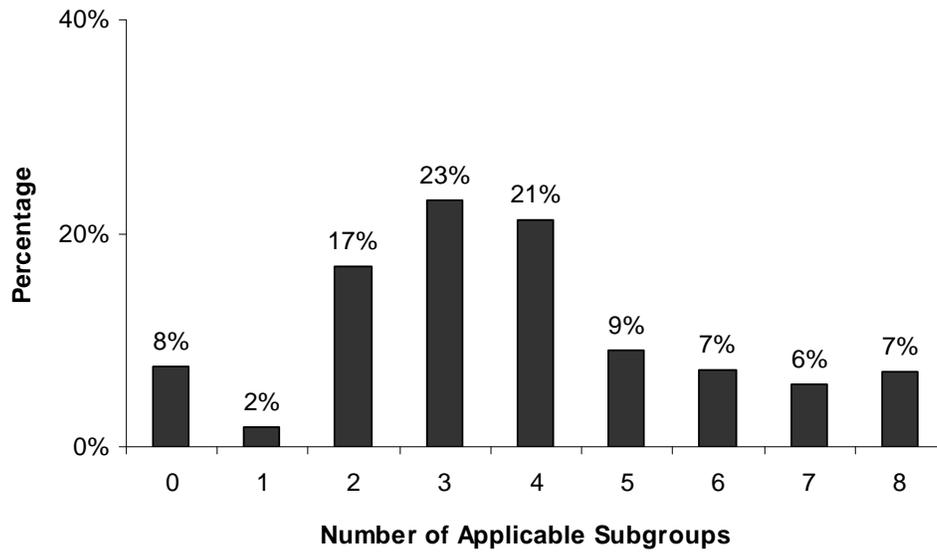


Exhibit reads: In 2007–08, 8 percent of RLIS districts had zero applicable subgroups for which AYP was calculated in mathematics and reading.

Source: EDEN-ED*Facts*.

AYP Status

To make AYP a district must meet targets for the percentage of students who are at or above state proficiency standards in math and reading overall and for all *NCLB* subgroups for which they are held accountable. Overall, 54 percent of RLIS districts made AYP in 2007–08. The vast majority of RLIS districts met AYP targets in mathematics (98 percent) and reading (98 percent) for white students. For minority students, many RLIS districts had no students or too few students in the category to report achievement data. For example, 46 percent of RLIS districts had too few black students to be held accountable for making AYP, while 79 percent of districts had too few Asian or Pacific Islander students. For those districts that did have a measurable number of minority students on whom to report, most made AYP. RLIS districts had the most difficulty making AYP for the black, non-Hispanic subgroup, although the majority of RLIS districts with the minimum number of students made AYP for this group (see Exhibits 28 and 29).

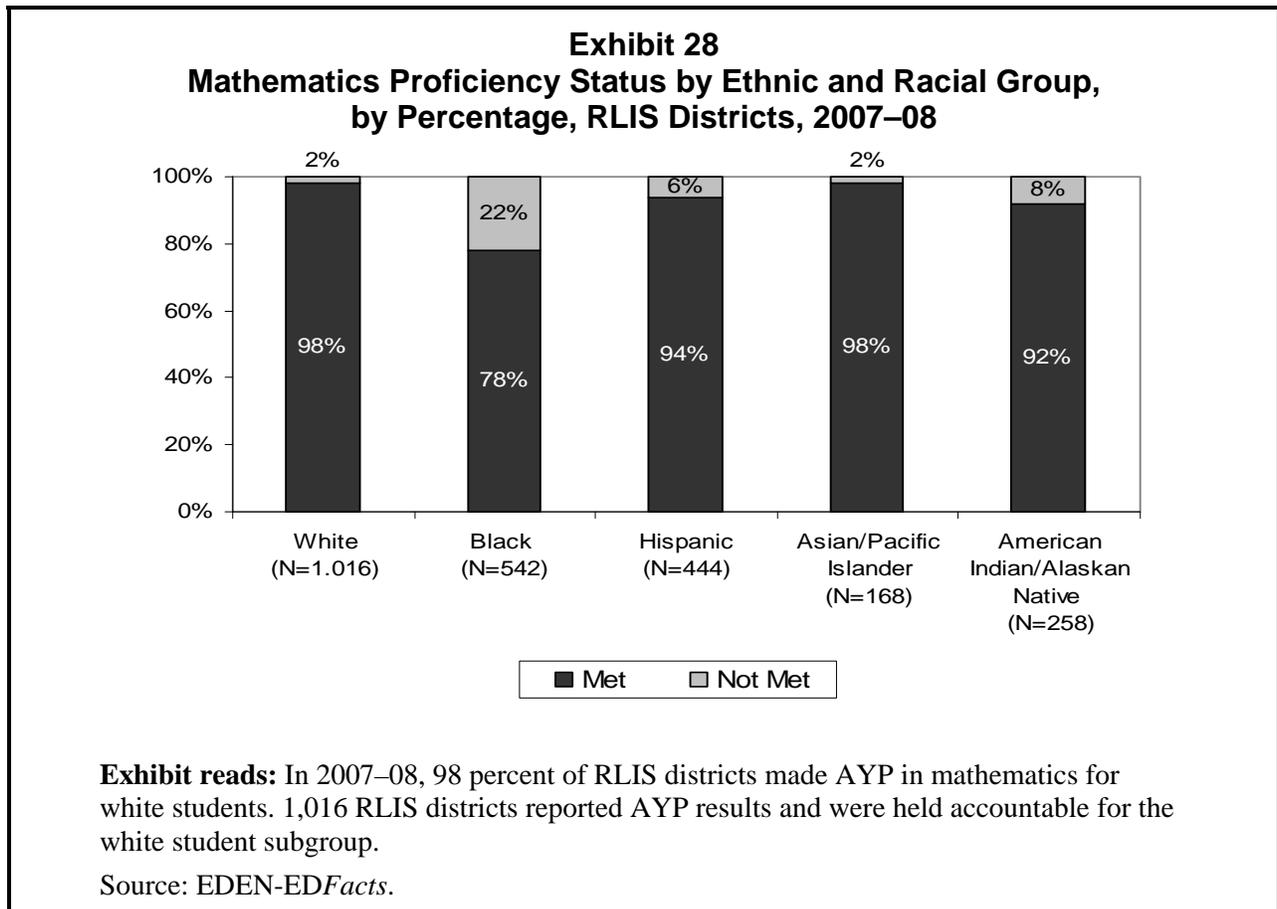


Exhibit 29
Reading Proficiency Status by Ethnic and Racial Group,
by Percentage, RLIS Districts, 2007–08

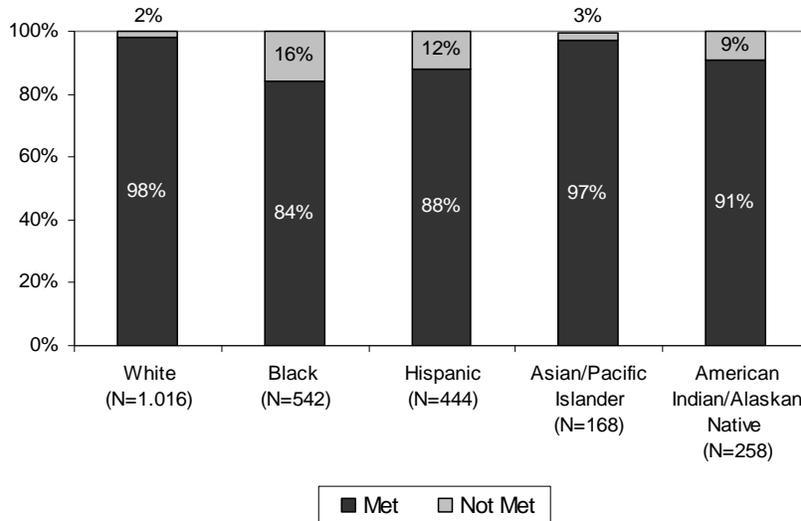


Exhibit reads: In 2007–08, 98 percent of RLIS districts made AYP in reading for white students. 1,016 RLIS districts reported AYP results and were held accountable for the white student subgroup.

Source: EDEN-EDFacts.

RLIS districts had varied success meeting AYP targets for students with disabilities, economically disadvantaged students, and limited English proficient students. The majority of RLIS districts met AYP targets for economically disadvantaged (82 percent) and limited English proficient (83 percent) students. About 60 percent of RLIS districts met AYP targets in mathematics and reading for students with disabilities (see Exhibits 30 and 31).

Exhibit 30
Mathematics Proficiency Status by Special Populations,
by Percentage, RLIS Districts, 2007–08

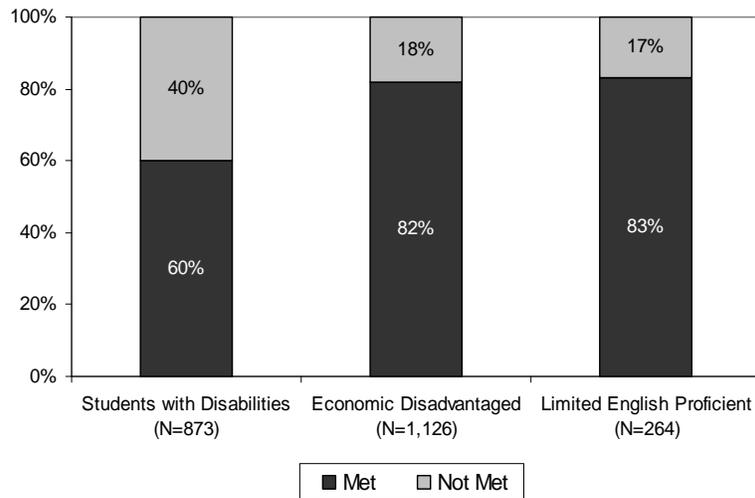


Exhibit reads: In 2007–08, 60 percent of RLIS districts made AYP in mathematics for students with disabilities. Eight-hundred and seventy-three RLIS districts reported AYP results and were held accountable for the students with disabilities subgroup.

Source: EDEN-ED*Facts*.

Exhibit 31
Reading Proficiency Status by Special Populations,
by Percentage, RLIS Districts, 2007–08

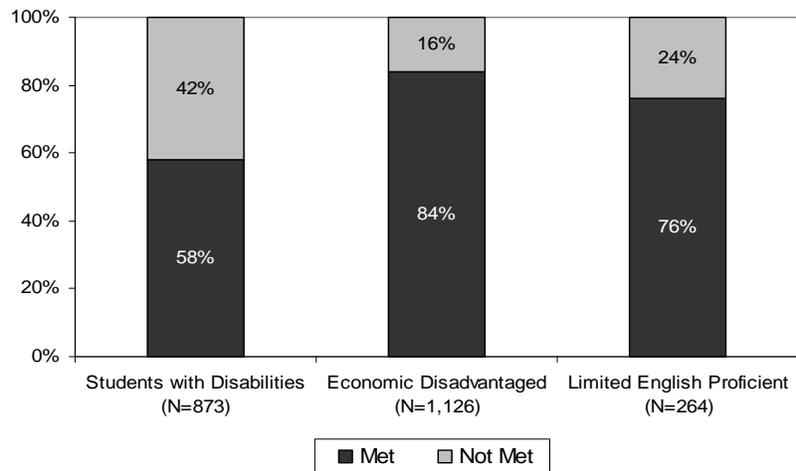
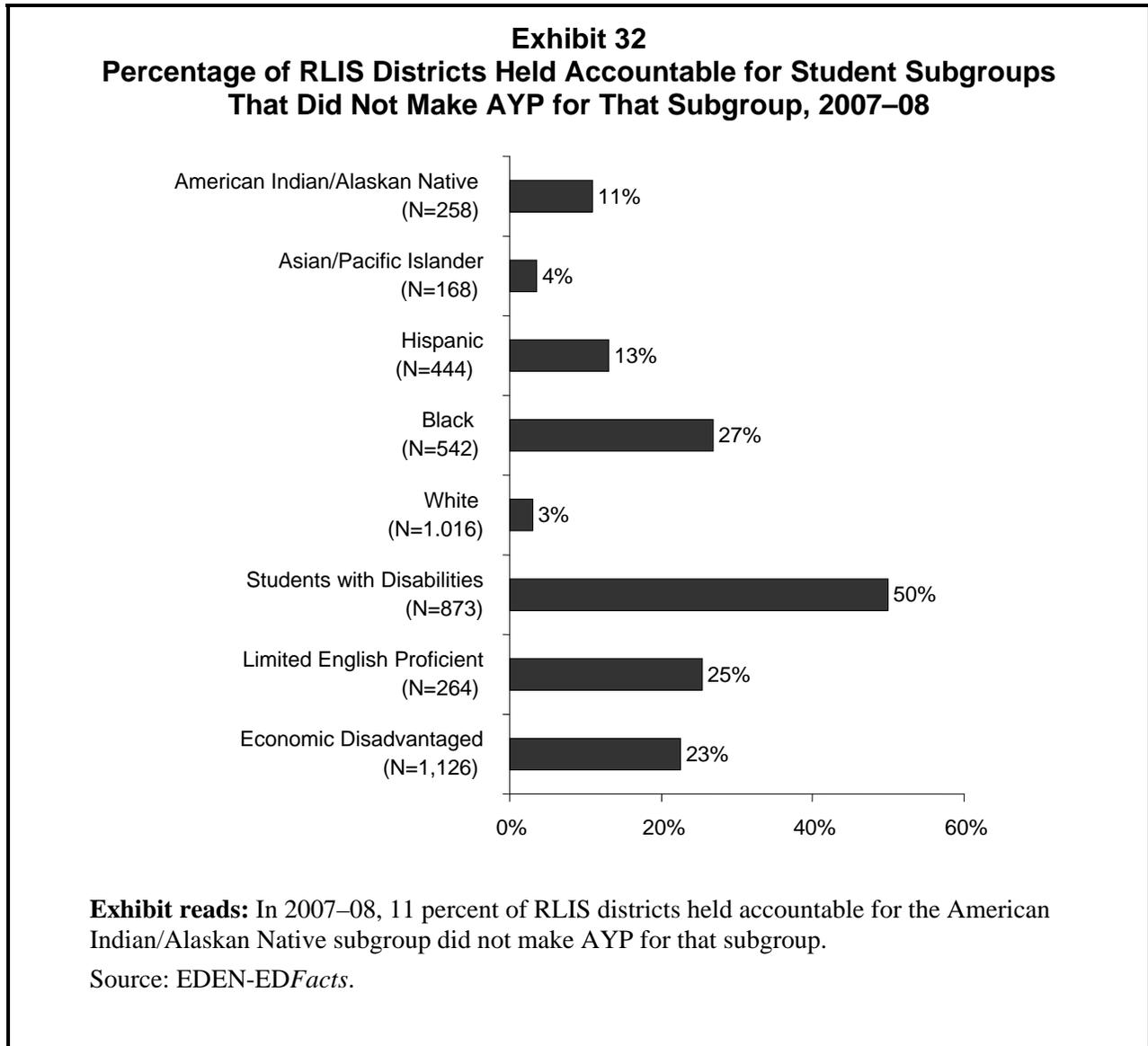


Exhibit reads: In 2007–08, 58 percent of RLIS districts made AYP in reading for students with disabilities. 873 RLIS districts reported AYP results and were held accountable for the students with disabilities subgroup.

Source: EDEN-ED*Facts*.

Exhibit 32 presents the percentage of districts that have a sufficient number of students in a subgroup that did not make AYP in either math or reading. For those RLIS districts held accountable for certain student subgroups in 2007–08, the greatest percentage of districts, about 50 percent, were not able to make AYP for the students with disabilities subgroup. About one-quarter of districts did not meet AYP for the black, limited English proficient, and economic disadvantaged subgroups. Less than 5 percent of RLIS districts did not meet AYP for the white and Asian/Pacific Islander subgroups.



Longitudinal Modeling of Student Achievement

Six years of achievement data (2002–03 through 2007–08) were analyzed to answer the following research question: What are the trends in achievement in RLIS districts compared with other rural districts? A longitudinal analysis was carried out comparing results on state achievement tests in RLIS districts and non-RLIS rural districts. The longitudinal analysis is intended to provide a descriptive picture of trends in student achievement in reading and math in RLIS and non-RLIS districts holding district demographics, such as percent poverty, percent of students who qualify for special education services, and percent of limited English proficient students, constant. Two types of models were fit to the data. The first set of models compares gains in student achievement over time in RLIS and non-RLIS districts—across the six years of data. The second set of models examines the role dosage played in achievement gains. The RLIS districts were divided into dosage groups based on how many years they received RLIS funding between 2002–03 and 2007–08 and gains in each dosage group were compared with gains in non-RLIS districts. It is important to note that the study design and analysis do not support a conclusion that the RLIS program *caused* these differences in achievement. Observed differences could be a result of the RLIS program or a result of other non-program factors, such as a regression to the mean.

Data Specifications

Data analyses included only rural districts, those with an NCES locale code of 6, 7, or 8. This information was obtained from the CCD. Data on state designation (linking states to districts) also came from the CCD.

Achievement data for the first three years came from NLSLSASD and for the last three years from EDEN/EDFacts. Data on achievement in mathematics and reading from EDEN-EDFacts were supplied in the form of *district*-level percent proficient on statewide assessments. Data from NLSLSASD were supplied in the form of grade level proficiency. Using all grades for which there were data, overall district-level proficiency was calculated from this data set for each year. Because state assessments are not comparable from state to state, the proficiency levels were converted to z-scores to assess the relative ranking of RLIS districts within their states.¹⁰ Interpretation of z-scores is discussed below.

Data used as covariates came from RLIS program data, CCD, and EDEN/EDFacts. These covariates took the value of the average for a district over five years: 2002–03, 2003–04, 2004–05, 2005–06, and 2006–07.¹¹ The covariates included in the longitudinal modeling were: average percent poverty, average percent minority, average percent of students with disabilities, average percent limited English proficiency, and average number of students per district.¹² Exhibit 33 summarizes the data sources used in the analyses.

¹⁰ See Appendix B for details on calculating z-scores.

¹¹ The 2002–03 data were missing the poverty percentages from the EDEN/EDFacts data. The 2003–04 data did not have poverty percentages for non-RLIS districts.

¹² The use of aggregate values in a longitudinal analysis is problematic when values are likely to change substantially over a short period of time. However, in this analysis, that was not the case. Although the values for the actual covariates were sometimes statistically different across the time points, the actual differences were very small.

Exhibit 33
Data Sources for Achievement Analyses by School Year

School Year	CCD	RLIS Eligibility	RLIS Poverty Rating	EDFacts-EDEN Achievement	NLSLSASD Achievement
2002–03	X	X			X
2003–04	X	X	X (RLIS only)		X
2004–05	X	X	X		X
2005–06	X	X	X	X	
2006–07	X	X	X	X	
2007–08		X	X	X	
2008–09		X	X	X	

Exhibit reads: Data used for the 2002–03 school year were drawn from the CCD, RLIS Eligibility data, and NLSLSASD Achievement Data.

Determination of RLIS Status

RLIS eligibility is determined annually. As a result, some districts move in and out of the program over the course of the period that we studied. For the most part, the data indicated a fairly steady number of RLIS-eligible districts. To ensure the robustness of the findings to these changes in RLIS status, the first set of longitudinal models was fit with RLIS status designated in one of three ways:

- First, a district was classified as an RLIS district if the data from the program office indicated that the district was ever eligible to receive RLIS funds.
- Next, a district was classified as an RLIS district only if it was eligible to receive funding in every year.
- Finally, a district’s RLIS status was treated exactly as indicated by the data, changing from year to year.

These specifications did not change the significance of the treatment effect estimates. Therefore, final interpretation was based on the third model that used the actual RLIS assignment.

Missing Data

Data were collected from a variety of sources, all of which had some missing data. When missing data could be substituted from one source to another (for example locale codes were found in the EDEN-EDFacts data as well as the Common Core Data) it was. The extent of the missing data is described in Appendix B. However, there were still missing data across the outcome measures as well as covariates. Since RLIS eligibility is determined based on poverty

level, the relationship between percent of data missing, poverty levels, and achievement scores was examined.

Overall, the data sets (one for mathematics and one for reading) included all variables of interest across all years for approximately 55 percent of districts. For mathematics, data were available for approximately 68 percent of RLIS districts and 55 percent of non-RLIS districts. For reading, data were available for approximately 65 percent of RLIS districts and 53 percent of non-RLIS districts. For the districts with achievement data, approximately 3 percent of the data were missing a value for average poverty level. In both of these data sets, achievement was slightly lower in the districts for which there were no poverty data. Data availability exhibits a similar pattern in RLIS and non-RLIS districts. In both the math and the reading data sets, there is less than 1 percent of poverty data missing for the RLIS districts and approximately 4 percent of the data missing for the non-RLIS districts.

In comparing the districts that have and do not have achievement data, there are virtually no differences in terms of poverty. For both the math and reading data sets, those districts with data have an average poverty level of 10 percent and those without have an average poverty level of 9 percent. Breaking down the data by condition, the pattern of data was consistent across districts with and without data, with the RLIS districts in both groups having a higher average poverty level (about 19 percent) as compared with the non-RLIS rural districts (about 8 percent).

Overall, although there is a substantial amount of missing data, the pattern of missingness does not seem to be biased toward either RLIS or non-RLIS districts, nor toward districts with lower or higher levels of poverty. However, caution must be taken when interpreting the findings given the overall amount of missing data.

Limitations

In addition to the missing data, two other limitations of the analyses should be taken into account. First, the analysis relies solely on data aggregated at the district level rather than individual student or school level. As a result, the longitudinal analysis looks at change in district performance over time but cannot account for any compositional changes in the student populations in these districts. Second, the analysis relies on percent proficient to measure achievement rather than scale scores on an assessment. As a result, the analyses only provide information about achievement around the proficiency cut point but do not provide information about changes in performance among high- or low-performing students.

Interpreting Impact Estimates

The outcomes in the longitudinal data analysis are z-scores, which indicate a district's relative standards compared with other districts in its states. For example, a district with a z score of 0.5 would have a portion of students meeting proficiency standards that was half a standard deviation about the state's mean. A change in a district's z-score does not indicate a developmental increase in its achievement, such as a five-point increase in the portion of students making AYP. Instead, a gain in z-score means that the district moved within the distribution of districts in the state.

In addition, the estimates reported below are annual gain scores. They should be interpreted as the average growth between two school years. To estimate the average growth over the entire six-year period, the estimates should be multiplied by five.

Approach to Modeling Student Achievement

Achievement data were analyzed by fitting a series of multilevel models. This modeling approach takes into account the variability within groups (i.e., time periods and districts) prior to estimating gains across groups. This analytic method results in more precise estimates of predictor variables (and covariates) than a non-nested modeling approach. Each model was conceived as having two levels with time (level 1) nested within district (level 2). In the first set of models, the RLIS treatment indicator (i.e., a dummy variable indicating whether a district was in the RLIS program or not) was treated as a level 1 variable so that RLIS status could change with time. Several district-level covariates were included as level 2 variables.¹³ In the second set of models, RLIS dosage (number of years receiving RLIS funds, ranging from zero to six) was modeled at the district level along with the same set of district-level controls.

¹³ Random effects coefficients were included in both levels of the modeling.

Mathematics Findings

- The annual rate of change in mathematics achievement was greater in RLIS than non-RLIS rural districts. However, the magnitude of this difference was relatively small (0.03 standardized units).
- There was no systematic relationship between the number of years a district received RLIS and gains in mathematics achievement. All RLIS dosage groups—districts receiving one, two, three, four, five, and six years of RLIS funding—exhibited positive annual gains relative to non-RLIS districts. However, these differences were statistically significant for districts that received funding for one, three, five, or six years.

There was a significant difference in mathematics achievement between RLIS and non-RLIS rural districts at the initial time point of measurement (2002–03). In 2002–03, achievement in RLIS districts was 0.07 standardized units lower than achievement in non-RLIS rural districts. The annual rate of change in achievement was also significantly different between RLIS and non-RLIS rural districts. On average, mathematics achievement in RLIS districts increased 0.03 standardized units more than that in non-RLIS rural districts each (see Exhibit 34). Over the six-year period, this represents an increase of 0.15 standardized units (0.03 for five years). It is important to note that the cause of the difference in the rate of change between RLIS and non-RLIS rural districts is not known. The difference could have been the result of the program or it could have been a result of non-program factors such as regression to the mean. In addition, the magnitude of the difference in growth is relatively small. By comparison, a 1 percentage point increase in the percent of students below the poverty line is associated with a -0.01 standardized unit change in mathematics achievement (see Exhibit B-11).

Exhibit 34
Mathematics Annual Achievement Gains for RLIS Districts,
2002–03 Through 2007–08

	Estimate
Difference in achievement between RLIS and non-RLIS districts in 2002–03	-0.07*
Difference in gains in RLIS and non-RLIS districts	0.03*

Exhibit reads: Mathematics achievement in RLIS districts increased 0.03 standardized units more than that in non-RLIS rural districts, which is statistically significant.

* indicates statistical significance at the .05 level.

Source: EDEN-EDFacts data, NLSLSASD, CCD.

The above analysis examines the relationship between receiving RLIS funds on academic achievement over time; however, it does not take into account the number of years that districts received that funding. The magnitude of the differences in gains across dosage groups (ranging from 0.02 to 0.04) was roughly similar to the difference between all RLIS and non-RLIS districts in mathematics achievement (0.03). Over the six-year period, this represents an increase of 0.10 to 0.20 standardized units. This pattern of results suggests no systematic relationship between dosage and mathematics achievement gains.

Exhibit 35
Mathematics Annual Achievement Gains for RLIS District,
by Number of Years of RLIS Eligibility, 2002–03 Through 2007–08

RLIS District	Estimate
Non-RLIS rural (n = 26,392)	-0.01*
RLIS-eligible for 1 year (n = 2,016)	0.02*
RLIS-eligible for 2 years (n = 746)	0.02
RLIS-eligible for 3 years (n = 476)	0.04*
RLIS-eligible for 4 years (n = 739)	0.02
RLIS-eligible for 5 years (n = 1,043)	0.04*
RLIS-eligible for 6 years (n = 3, 118)	0.03*

Exhibit reads: The rate of academic achievement in non-RLIS rural districts was -0.01. This was significant at the .05 level.

* indicates statistical significance at the .05 level.

Source: EDEN-EDFacts data, NLSLSASD, CCD.

Reading Findings

- The annual rate of change in reading achievement was greater in RLIS than non-RLIS rural districts. Again, the magnitude of this difference is small (.02 standardized units).
- There was no systematic relationship between the number of years a district received RLIS and annual gains in reading achievement. All RLIS dosage groups—districts receiving one, two, three, four, five, and six years of RLIS funding—exhibited positive gains relative to non-RLIS districts. However, these differences were not statistically significant.

There was a significant difference in reading achievement between RLIS and non-RLIS rural districts at the initial time point of measurement (2002–03). In 2002–03, achievement scores in RLIS districts were 0.07 standardized units lower than achievement scores in non-RLIS rural districts. The annual rate of change in achievement was significantly different between RLIS and non-RLIS rural districts. On average, reading achievement in RLIS districts increased 0.02 standardized units more than that in non-RLIS rural districts (see Exhibit 36). Over the six-year period, this represents a change of 0.10 standardized units (0.02 for five years). By comparison, a 1 percentage point increase in the percent of students below the poverty line is associated with a -0.01 standardized unit change in reading achievement (see Exhibit B-14). Again, as this evaluation did not examine causality, it cannot be ascertained whether this change is due to the RLIS program or other, non-program factors.

Exhibit 36
Reading Annual Achievement Gains for RLIS Districts,
2002–03 Through 2007–08

	Estimate
Difference in achievement between RLIS and non-RLIS districts in 2002–03	-0.05*
Difference in gains in RLIS and non-RLIS districts	0.02*

Exhibit reads: Reading achievement in RLIS districts increased 0.02 standardized units more than that in non-RLIS rural districts, which is statistically significant.

* indicates statistical significance at the .05 level.

Source: EDEN-EDFacts data, NLSLSASD, CCD.

The next analysis differentiates gains based on the number of years a district received funding by comparing each dosage amount to those districts not receiving any funding. Differences were not statistically significant, suggesting no systematic relationship between dosage and reading achievement gains (see Exhibit 37).

Exhibit 37
Reading Annual Achievement Gains for RLIS District,
by Number of Years of RLIS Eligibility, 2002–03 Through 2007–08

RLIS District	Estimate
Non-RLIS rural (n = 25,911)	-0.01 *
RLIS-eligible for 1 year (n = 1,969)	0.01
RLIS-eligible for 2 years (n = 702)	0.01
RLIS-eligible for 3 years (n = 458)	0.02
RLIS eligible for 4 years (n = 709)	0.01
RLIS eligible for 5 years (n = 1,011)	0.03
RLIS eligible for 6 years (n = 2,970)	0.02

Exhibit reads: The rate of change for non-RLIS rural districts was -0.01. This was significant at the .05 level.

* indicates statistical significance at the .05 level.

Source: EDEN-EDFacts data, NLSLSASD, CCD.

Characteristics of RLIS Implementation and Student Achievement

Finally, drawing on data from the survey of a sample of RLIS districts, the relationship between characteristics of RLIS district implementation and district student achievement was investigated. Two key characteristics of RLIS implementation were examined: district-reported priorities guiding use of RLIS funds; and district-reported activities implemented using RLIS funds. As in the analyses described above, it should be stressed that these analyses are solely descriptive in nature and should not be interpreted as describing a causal relationship between characteristics of RLIS implementation and student achievement.

Data Specifications

These analyses examined the relationship between characteristics of implementation reported by a sample of RLIS districts in spring 2009 and student achievement in the most recent school year for which data were available, 2007–08. Data on the percent of students who were proficient in each district was acquired from the EDEN-EDFacts data system and used to calculate district z-scores to allow comparisons to be made across states.

Two sets of items from the district survey were included in the analysis. The first set of items focused on whether districts identified each of the following goals as a focus in their use of RLIS funds:

- Increasing student achievement in a particular subject
- Reducing the high school dropout rate
- Improving the quality of instruction
- Improving the ability of English language learners to achieve proficiency in English and reach high academic standards
- Ensuring that all students will be educated in learning environments that are safe, drug-free, and conducive to learning
- Addressing issues specific to rural location, e.g., retaining teachers, providing distance learning opportunities, etc.

If a district rated a goal as a moderate or major focus in their use of RLIS funds, the goals were considered a district goal.

Next, the relationship between the activities that were a focus of each district's use of RLIS funds and student achievement was examined. The following activities were examined:

- Teacher recruitment and retention, including the use of signing bonuses and other financial incentives
- Teacher professional development
- Education technology, including software and hardware
- Parental involvement activities
- Activities authorized under the Safe and Drug-Free Schools Program
- Activities authorized under Title I, Part A
- Language instruction for ELL or LEP students.

Again, if a district rated an activity as a moderate or major focus in their use of RLIS funds, the activity was considered a focus in the district.

A variety of district-level controls were included in the models. First, past district performance was controlled for through the inclusion of z-scores from the 2002–03 school year. A variety of district characteristics, including district size and locale were included from the 2006–07 CCD data file. Given the relationship between RLIS dosage and achievement discussed above, the number of years a district had been in receipt of district funds was also included in the model. Finally, at the state level, region of the country was included as a control.

Limitations

These analyses should only be considered exploratory, examining whether relationships could exist between how districts report using their RLIS funds and student achievement. As such, several limitations should be noted. The analyses are not designed to draw causal conclusions. In addition, the data used in these analyses are cross sectional. That is, the analyses examine the relationship between district survey responses and the most recent year of achievement data (2007–08), though the surveys were implemented in the spring of the 2008–09 school year. As a result, the analyses cannot provide information about the direction of any relationship found. For example, if a statistically significant relationship is found between a district having a particular goal it could be the case that setting that goal led to increased student achievement, but it could also be the case that the district set that goal because of higher levels of student achievement, or a third factor could account for the results.

Similar to the longitudinal analysis above, missing data are also an issue in this analysis. When all of the covariates or outcome data were not available, cases were not included in the analysis. These analyses only included the 467 RLIS eligible districts for which there was both survey data and student assessment data. In addition, the limitations of using a district-level z-score calculated from the percent of students who met proficiency standards discussed above hold for this analysis as well.

Finally, the analyses presented in this chapter test multiple hypotheses. As a result, it is possible that we find statistical significance simply by chance. While multiplicity adjustments are not needed in purely exploratory analyses, this limitation should be noted and further analyses are needed before firm conclusions are drawn (Schochet, 2008).

Approach to Modeling

Given the nested structure of the data, a two-level hierarchical linear modeling approach was employed in these analyses. Each model was conceived as having two levels with district (level 1) nested within state (level 2). The variables of interest (goals, activities, and ratings of state technical assistance) were included as level 1 predictors along with the controls discussed above.

Mathematics Findings

- Districts that set RLIS goals to decrease the dropout rate and increase the quality of instruction had significantly higher mathematics achievement than districts that did not set these goals. None of the other goals set by RLIS districts were significantly associated with mathematics achievement.
- District reports of a focus on particular activities using RLIS funds were not significantly related to mathematics achievement for any of the activities.

Goals. Mathematics achievement in districts that reported that reducing the dropout rate was a focus of their use of RLIS funds was, on average, 0.3 standardized units higher than in districts that did not identify this as an RLIS goal (see Exhibit 38). Similarly, mathematics achievement in districts that reported using their RLIS funds to increase the quality of instruction was 1.0 standard units higher than in districts that did not identify this as a goal. Both of these relationships were significant at the .05 level. Interestingly, the coefficient on a district having a student achievement goal is negative. While this relationship is not statistically significant, it reminds the reader that with cross-sectional data we do not know the directionality of the relationships examined. One plausible explanation for the results presented here is that districts with low student achievement are more likely to set student achievement goals, possibly explaining the positive relationship between some of the other goals and student achievement. This explanation is supported by the finding in chapter 2 that analyzing and discussing district data is often a part of planning for the use of RLIS funds.

Exhibit 38
Mathematics Achievement Associated With Certain RLIS Goals, 2007–08

RLIS Goal	Coefficient
Student Achievement Goal	-0.12
Dropout Goal	0.30*
Instruction Goal	1.00*
ELL Goal	0.03
Safety Goal	0.03
Rural Goal	-0.11

Exhibit reads: Districts with a student achievement goal had mathematics achievement that was 0.12 standardized units lower on average. This relationship is not statistically significant.

* indicates statistical significance at the .05 level.

Source: EDEN-EDFacts data, NLSLSASD, CCD, RLIS district survey.

Activities. District survey respondents were asked whether certain activities were a focus of their use of RLIS funds. There was no relationship between focusing on any of these activities and mathematics achievement (see Exhibit 39).

Exhibit 39
Mathematics Achievement
Associated With Certain RLIS Activities, 2007–08

RLIS Activity	Coefficient
Teacher Recruitment	-0.08
Professional Development	-0.09
Educational Technology	0.16
Parent Involvement	0.01
Safe and Drug-Free Schools	0.00
Title I, Part A	0.07
Language Instruction for ELL	0.00

Exhibit reads: Districts that focused on teacher recruitment activities had mathematics achievement that was 0.08 standardized units lower on average. This relationship is not statistically significant.

* indicates statistical significance at the .05 level

Source: EDEN-EDFacts data, NLSLSASD, CCD, RLIS district survey.

Reading Findings

- District reading achievement was not significantly associated with districts reporting a focus on any of the RLIS goals.
- Districts were asked which activities were a priority in the use of RLIS funds. None of these activities was significantly related to reading achievement in the sample of surveyed RLIS districts.

Goals. District reading achievement was not significantly associated with districts specifying any of the RLIS goals (see Exhibit 40).

Exhibit 40
Reading Achievement
Associated With Certain RLIS Goals, 2007–08

RLIS Goal	Coefficient
Student Achievement Goal	0.26
Dropout Goal	0.19
Instruction Goal	0.68
ELL Goal	-0.16
Safety Goal	0.21
Rural Goal	-0.15

Exhibit reads: Having a student achievement goal was associated with reading achievement that was on average 0.26 standardized units higher. This relationship is not statistically significant.

* indicates statistical significance at the .05 level.

Source: EDEN-EDFacts data, NLSLSASD, CCD, RLIS district survey.

Activities. Reading achievement was not significantly related to the implementation of any of the RLIS activities (see Exhibit 41).

Exhibit 41
Reading Achievement
Associated With Certain RLIS Activities, 2007–08

RLIS Activity	Coefficient
Teacher Recruitment	-0.03
Professional Development	-0.04
Educational Technology	0.06
Parent Involvement	0.02
Safe and Drug-Free Schools	0.17
Title I, Part A	-0.03
Language Instruction for ELL	-0.46

Exhibit reads: Focusing RLIS funds on teacher recruitment was associated with reading achievement that was on average 0.03 standardized units lower. This relationship is not statistically significant.

* indicates statistical significance at the .05 level.

Source: EDEN-EDFacts data, NLSLSASD, CCD, RLIS districts survey.

Chapter 5: Conclusions

Surveys of state and district RLIS coordinators, as well as interviews with district RLIS coordinators and a close review of district documents, showed that, in addition to the primary goal of making AYP, the most common goals for district RLIS programs were improving the quality of instruction and improving student achievement in specific subject areas. Interview reports by district RLIS coordinators and a review of district documents indicated that districts primarily attempted to achieve these goals by using RLIS funds for teacher pay, educational technology, professional development, and materials; district and state survey respondents also reported that RLIS funds were frequently used for educational technology, as well as to support activities authorized under Title I, Part A. It appeared that states and districts took advantage of the flexibility of the RLIS program that allowed them to use these funds to meet specific needs in their districts. According to survey respondents, states provided useful and timely training and technical assistance to districts on the RLIS program, in particular, by providing assistance in identifying specific needs for improvement and how to focus RLIS funds on making AYP.

Except for the nature of RLIS being the last of their federal grant allocations to be finalized, which may result in constraints on a district's budgeting process, neither the interviews nor the surveys with states and districts indicated the existence of major challenges to implementation of the RLIS program by states or districts.

Characteristics of RLIS districts have remained relatively stable over the years of the program's implementation. On average, RLIS districts have more students than other rural districts, but fewer students than districts nationally. Consistent with program goals, RLIS districts serve a higher proportion of students who qualified for free or reduced-price meals than districts overall or non-RLIS rural districts. Despite a slight increase in per-pupil spending in RLIS districts between 2003–04 and 2004–05, per-pupil spending in RLIS districts remained substantially lower than in all districts nationally or in other rural districts.

Overall, 54 percent of RLIS districts met all AYP targets in mathematics and reading in 2007–08. Among all subgroups, RLIS districts had the most trouble making AYP for students with Individualized Education Programs (IEPs); among racial and ethnic subgroups, RLIS districts had the most difficulty making AYP for the black student subgroup, although the majority of RLIS districts with the minimum number of students made AYP for this group.

Though achievement gains cannot be attributed to the RLIS program, the rate of annual academic improvement in mathematics (0.03 standardized units) and reading (0.02 standardized units) for districts that received RLIS funding was significantly greater than for non-RLIS districts. Further research would need to be done to understand whether RLIS funding is responsible for these gains in achievement as well as the mechanism through which such a relationship may operate.

References

U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, Common Core of Data: School Years 2003–04 and 2006–07, available at <http://nces.ed.gov/ccd/>, cited September 2009.

U.S. Department of Education, Institute of Education Sciences (2008). Technical methods report: Guidelines for multiple testing in impact evaluations, by Peter Z Schochet, Washington, D.C.: Author.

U.S. Department of Education (2010). National Longitudinal School-Level State Assessment Score Database, 2002–05, previously unpublished tabulations. Available from <http://38.112.57.50>.

U.S. Department of Education, Office of Elementary and Secondary Education (2009). Program data from the Office of Elementary and Secondary Education, Rural Education Achievement Program (REAP).

U.S. Department of Education, Office of Elementary and Secondary Education (2010). Rural and Low-Income Schools Program: Eligibility. Available from <http://www2.ed.gov/programs/reaprlisp/eligibility.html>, cited April 2010.

U.S. Department of Education, Office of Planning, Evaluation and Policy Development (2010). EDFacts, previously unpublished tabulations.

APPENDIX A: SUPPORTING DATA FOR CHAPTER 3

Demographic Data for RLIS, Non-RLIS Rural, and All U.S. Districts

The tables below provide supporting data for the exhibits presented in Chapter 3 of the text. Additional demographic data are presented, along with the number of cases included in each figure.

Exhibit A-1 Total Districts in CCD Data Files, 2003–04 Through 2006–07

	2003–04	2004–05	2005–06	2006–07
RLIS Districts	1,299	1,127	1,188	1,287
All Districts	17,521	17,804	17,940	18,786
Non-RLIS Rural Districts	8,789	8,835	8,424	8,306

Exhibit reads: In 2003–04, 1,299 districts that received RLIS funds reported data; in 2004–05, 1,127 districts reported data; in 2005–06, 1,188 districts reported data; in 2006–07, 1,287 districts reported data.

Source: Common Core of Data.

**Exhibit A-2
District Student Population, 2003–04 Through 2006–07**

	2003–04		
	N	Mean	Max.
RLIS Districts	1,297	2,214	24,056
All Districts	15,335	3,145	1,041,976
Non-RLIS Rural Districts	8,492	1,117	40,382

	2004–05		
	N	Mean	Max.
RLIS Districts	1,123	2,150	24,268
All Districts	15,391	3,150	1,032,485
Non-RLIS Rural Districts	8,560	1,140	41,205

	2005–06		
	N	Mean	Max.
RLIS Districts	1,188	2,228	24,341
All Districts	15,435	3,156	1,014,058
Non-RLIS Rural Districts	8,423	1,135	42,035

	2006–07		
	N	Mean	Max.
RLIS Districts	1,284	2,204	23,825
All Districts	15,334	3,186	999,150
Non-RLIS Rural Districts	7,807	1,161	42,572

Exhibit reads: In 2003–04, 1,297 districts that received RLIS funds reported student population information. For those districts, the mean district size was 2,214 students, with a maximum of 24,056.

Source: Common Core of Data.

Exhibit A-3
Comparison of Districts' Fall Membership and Sum of Grade Level Totals,
2003–04 Through 2004–05

	2003–04		2004–05	
	Fall Membership	Sum of Grade Level Totals	Fall Membership	Sum of Grade Level Totals
RLIS Districts	2,872,011	2,863,106	2,414,494	2,403,049
Non-RLIS Rural Districts	9,487,085	9,588,749	9,759,788	9,807,602
All U.S. Districts	48,221,532	49,227,340	48,477,478	49,387,565

Exhibit reads: In 2003–04, RLIS districts reported a total fall membership of 2,872,011. The sum of the grade totals for RLIS districts in 2003–04 was 2,863,106.

Source: Common Core of Data.

Exhibit A-4
NCES Locale Codes, RLIS Districts, 2003–04 Through 2006–07

	2003–04 N=1,299		2004–05 N=1,124		2005–06 N=1,185		2006–07 N=1,286	
	N	Percentage	N	Percentage	N	Percentage	N	Percentage
1-Large City	0	0.0%	0	0.0%	0	0.0%	0	0.0%
2-Mid-Size City	6	0.5%	0	0.0%	0	0.0%	0	0.0%
3-Urban Fringe of Large City	29	2.0%	0	0.0%	1	0.1%	1	0.1%
4-Urban Fringe of Mid-Size City	42	3.0%	0	0.0%	0	0.0%	0	0.0%
5-Large Town	5	0.4%	0	0.0%	1	0.1%	1	0.1%
6-Small Town	500	39.0%	482	43.0%	500	42.0%	536	42.0%
7-Rural Outside CBSA/MSA	571	44.0%	531	47.0%	555	47.0%	589	46.0%
8-Rural Inside CBSA/MSA	144	11.0%	111	10.0%	128	11.0%	159	12.0%

Exhibit reads: In 2003–04, no RLIS districts had a locale code of 1-Large City.

Note: RLIS eligibility is determined by a district’s NCES locale code of two years earlier. This table presents district locale codes for the school year in which funds were received, which may explain the existence of RLIS districts with a locale code other than 6, 7, or 8.

Source: Common Core of Data.

**Exhibit A-5
NCES Locale Codes, U.S. Districts, 2006–07**

	RLIS Districts N=1,286		All Districts N=15,719		Non-RLIS rural Districts N=8,306	
	N	Percentage	N	Percentage	N	Percentage
1-Large City	0	0.0%	940	6.0%	0	0.0%
2-Mid-Size City	0	0.0%	976	6.0%	0	0.0%
3-Urban Fringe of Large City	1	0.1%	2,583	16.0%	0	0.0%
4-Urban Fringe of Mid-Size City	0	0.0%	1,497	10.0%	0	0.0%
5-Large Town	1	0.1%	133	1.0%	0	0.0%
6-Small Town	536	42.0%	1,687	11.0%	1,151	14.0%
7-Rural Outside CBSA/MSA	589	46.0%	5,235	33.0%	4,646	56.0%
8-Rural Inside CBSA/MSA	159	12.0%	2,668	17.0%	2,509	31.0%

Exhibit reads: In 2006–07, no districts that received RLIS funds had a locale code of 1-Large City. Nationwide, 940 districts (6 percent) had a locale code of 1-Large City, and no non-RLIS rural districts had a locale code of 1-Large City.

Source: Common Core of Data.

**Exhibit A-6
Regional Distribution of RLIS Districts, by Number and Percent, 2003–04 Through
2006–07**

	2003–04 N=1,298		2004–05 N=1,126		2005–06 N=1,188		2006–07 N=1,285	
	N	Percent	N	Percent	N	Percent	N	Percent
Midwest	187	14%	135	12%	128	11%	137	11%
Northeast	119	9%	102	9%	102	9%	119	9%
South	850	66%	777	69%	833	70%	883	69%
West	142	11%	112	10%	125	11%	146	12%

Exhibit reads: In 2003–04, 187 districts that received RLIS funds were located in the Midwest, about 14 percent of RLIS districts. In 2004–05, 135 districts that received RLIS funds were located in the Midwest, about 12 percent of RLIS districts.

Source: Common Core of Data.

Exhibit A-7
Regional Distribution of U.S. Districts, by Number and Percent, 2006–07

	RLIS Districts N=1,285		All Districts N=17,755		Non-RLIS Districts, Rural N=8,078	
	N	Percent	N	Percent	N	Percent
Midwest	137	11%	6,369	36%	3,297	41%
Northeast	119	9%	4,018	23%	1,401	17%
South	883	69%	3,967	22%	1,692	21%
West	146	11%	3,388	19%	1,688	21%

Exhibit reads: In 2006–07, 137 districts that received RLIS funds were located in the Midwest, about 11 percent of RLIS districts.

Source: Common Core of Data.

Exhibit A-8
Student-Teacher Ratios, RLIS Districts, 2003–04 Through 2006–07

	2003–04 N=1,289	2004–05 N=1,076	2005–06 N=1,173	2006–07 N=1,068
Mean	14.7	14.5	14.4	14.2
Standard Deviation	2.3	2.2	2.2	2.3

Exhibit reads: In 2003–04, the average student-teacher ratio for RLIS districts was 14.7 students per teacher, with a standard deviation of 2.3.

Note: Due to a wide variance in reported student-teacher ratios, the sample was limited to those districts with ratios greater than 0 but less than 50.

Source: Common Core of Data.

Exhibit A-9
Student-Teacher Ratios, U.S. Districts, 2006–07

	RLIS Districts N=1,068	All Districts N=13,232	Non-RLIS Districts, Rural N=6,628
Mean	14.2	14.0	13.0
Standard Deviation	2.3	4.4	4.0

Exhibit reads: In 2006–07, the average student-teacher ratio for RLIS districts was 14.2 students per teacher, with a standard deviation of 2.3.

Note: Due to a wide variance in reported student-teacher ratios, the sample was limited to those districts with ratios greater than 0 but less than 50.

Source: Common Core of Data.

Exhibit A-10
Average Per-Pupil Spending, by Category, RLIS Districts, 2003–04 Through 2006–07

	2003–04 N=1,297	2004–05 N=1,123	2005–06 N=1,188	2006–07 N=1,284
Elementary-Secondary	\$7,461	\$7,963	\$8,258	\$8,773
Instruction	\$4,523	\$4,804	\$4,944	\$5,261
Support Services	\$2,525	\$2,723	\$2,856	\$3,030
Other Elementary-Secondary Programs	\$414	\$436	\$458	\$481
Salary	\$4,650	\$4,885	\$5,008	\$5,296
Benefits	\$1,316	\$1,424	\$1,519	\$1,679
Capital Outlay	\$756	\$684	\$664	\$816
Non Elementary-Secondary Programs	\$66	\$69	\$67	\$69
Average Total Expenditures	\$8,435	\$8,865	\$9,153	\$9,842

Exhibit reads: In 2003–04, the average per-pupil spending on elementary-secondary programs in RLIS districts was \$7,461.

Source: Common Core of Data.

Exhibit A-11
Average Per-Pupil Spending, by Category, U.S. Districts, 2006–07

	RLIS Districts N=1,284	All Districts N=15,334	Non-RLIS Rural Districts N=7,807
Elementary-Secondary	\$8,773	\$10,283	\$10,466
Instruction	\$5,261	\$6,108	\$6,238
Support Services	\$3,030	\$3,759	\$3,773
Other Elementary-Secondary Programs	\$481	\$417	\$456
Salary	\$5,296	\$5,909	\$6,060
Benefits	\$1,679	\$1,932	\$1,920
Capital Outlay	\$816	\$1,053	\$1,034
Non Elementary-Secondary Programs	\$69	\$93	\$73
Average Total Expenditures	\$9,842	\$11,777	\$11,965

Exhibit reads: In 2006–07, the average per-pupil spending on elementary-secondary programs in RLIS districts was \$8,773.

Source: Common Core of Data.

Exhibit A-12
Average District Per-Pupil Spending by Region, 2006–07

	RLIS Districts N=1,284		All Districts N=15,334		Non-RLIS Rural Districts N=7,807	
	N	Mean	N	Mean	N	Mean
Midwest	137	\$9,611	5,592	\$10,384	3,180	\$10,262
Northeast	119	\$13,795	3,119	\$15,204	1,314	\$14,710
South	882	\$9,328	3,530	\$10,404	1,614	\$11,090
West	146	\$9,939	3,093	\$12,406	2,543	\$13,861
U.S. Average	1,284	\$9,842	15,334	\$11,777	7,807	\$11,965

Exhibit reads: In RLIS districts in the Midwest, the average per-pupil spending was \$9,611.

Source: Common Core of Data.

Exhibit A-13
Ethnic and Racial Make-up of Student Body,
RLIS Districts, 2003–04 Through 2006–07

	2003–04 N=1,259		2004–05 N=1,087		2005–06 N=1,188		2006–07 N=1,284	
	Sum	Percentage	Sum	Percentage	Sum	Percentage	Sum	Percentage
White	1,641,049	57%	1,344,630	56%	1,585,494	60%	1,732,794	61%
Black	693,678	24%	577,175	24%	625,830	24%	659,440	23%
Hispanic	291,358	10%	279,449	12%	301,571	11%	297,860	11%
Asian/ Pacific Islander	15,401	1%	12,327	1%	14,882	1%	17,067	1%
American Indian/ Alaskan Native	114,333	4%	93,927	4%	101,270	4%	106,063	4%
Unknown	116,192	4%	106,986	4%	17,557	1%	13,054	1%
Fall Membership	2,872,011	100%	2,414,494	100%	2,646,604	100%	2,826,278	100%

Exhibit reads: In 2003–04, there were 1,641,049 white students in RLIS districts, about 57 percent of total students.

Source: Common Core of Data.

**Exhibit A-14
Ethnic and Racial Make-up of Student Body, U.S. Districts, 2006–07**

	RLIS Districts N=1,284		Non-RLIS Districts, Rural N=8,003		All Districts N=16,062	
	Sum	Percentage	Sum	Percentage	Sum	Percentage
White	1,732,794	61%	7,306,209	81%	27,347,536	56%
Black	659,440	23%	650,604	7%	8,275,666	17%
Hispanic	297,860	11%	776,929	9%	10,482,519	22%
Asian/Pacific Islander	17,067	1%	106,627	1%	2,279,868	5%
American Indian/ Alaskan Native	106,063	4%	185,115	2%	588,953	1%
Unknown	13,054	1%	86,961	0.4%	635,078	1.3%
Total Student Population	2,829,405	100%	9,066,256	100%	48,852,324	100%

Exhibit reads: In 2006–07 there were 1,732,794 white students in RLIS districts, about 61 percent of total students.

Source: Common Core of Data.

Exhibit A-15
Students Who Qualify for Free or Reduced-price Meals, by Number and Percentage, U.S. Districts, 2003–04 Through 2006–07

	2003–04			
	N	Total Student Population	Students Who Qualify	Percentage of Students Who Qualify
RLIS Districts	1,122	2,492,878	1,539,817	62%
All Districts	13,845	43,611,863	17,535,650	40%
Non-RLIS Rural Districts	7,887	8,644,497	3,040,172	35%

	2004–05			
	N	Total Student Population	Students Who Qualify	Percentage of Students Who Qualify
RLIS Districts	1,003	2,137,532	1,354,777	63%
All Districts	13,978	45,314,142	18,135,119	40%
Non-RLIS Rural Districts	8,072	9,174,763	3,332,410	36%

	2005–06			
	N	Total Student Population	Students Who Qualify	Percentage of Students Who Qualify
RLIS Districts	1,184	2,641,047	1,639,082	62%
All Districts	15,007	47,485,701	19,504,952	42%
Non-RLIS Rural Districts	7,925	9,180,627	3,386,428	37%

	2006–07			
	N	Total Student Population	Students Who Qualify	Percentage of Students Who Qualify
RLIS Districts	1,281	2,823,606	1,759,291	62%
All Districts	14,378	46,864,994	20,813,787	43%
Non-RLIS Rural Districts	7,428	8,942,328	3,335,477	37%

Exhibit reads: In 2003–04, 1,122 RLIS districts reported data on both total student population and students who qualify for free or reduced-price meals. In those districts, there were 2,492,878 students total and 1,539,817 students who qualified for free or reduced-price meals, about 62 percent of students total.

Source: Common Core of Data.

Exhibit A-16
Students Who Are Limited English Proficient, U.S. Districts, by Number and Percentage, 2003–04 Through 2006–07

	2003–04			
	N	Total Student Population	Students Who Qualify	Percentage of Students Who Qualify
RLIS Districts	1,157	2,641,166	124,477	5%
All Districts	12,923	40,512,731	3,819,470	9%
Non-RLIS Rural Districts	7,397	8,007,678	297,330	4%

	2004–05			
	N	Total Student Population	Students Who Qualify	Percentage of Students Who Qualify
RLIS Districts	1,024	2,244,961	110,384	5%
All Districts	12,438	39,318,402	3,898,520	10%
Non-RLIS Rural Districts	7,381	8,178,601	306,824	4%

	2005–06			
	N	Total Student Population	Students Who Qualify	Percentage of Students Who Qualify
RLIS Districts	1,102	2,481,684	123,262	5%
All Districts	13,431	43,543,749	4,208,593	10%
Non-RLIS Rural Districts	7,084	8,052,302	306,315	4%

	2006–07			
	N	Total Student Population	Students Who Qualify	Percentage of Students Who Qualify
RLIS Districts	1,013	2,449,234	98,405	4%
All Districts	11,426	35,905,927	2,357,285	7%
Non-RLIS Rural Districts	5,581	7,332,289	240,285	3%

Exhibit reads: In 2003–04, 1,157 RLIS districts reported data on both total student population and the number of Limited English Proficient students. In those districts, there were 2,641,166 students total and 124,477 students were LEP, about 5 percent of total students.

Source: Common Core of Data.

Exhibit A-17
Students With Individualized Education Programs,
U.S. Districts, by Number and Percentage, 2003–04 Through 2006–07

	2003–04			
	N	Total Student Population	Students Who Qualify	Percentage of Students Who Qualify
RLIS Districts	1,241	2,795,666	429,531	15%
All Districts	14,614	45,372,370	6,149,728	14%
Non-RLIS Rural Districts	8,184	9,100,063	1,313,385	14%

	2004–05			
	N	Total Student Population	Students Who Qualify	Percentage of Students Who Qualify
RLIS Districts	1,039	2,300,857	353,549	15%
All Districts	13,546	43,371,565	5,911,083	14%
Non-RLIS Rural Districts	7,742	8,960,685	1,302,461	15%

	2005–06			
	N	Total Student Population	Students Who Qualify	Percentage of Students Who Qualify
RLIS Districts	1,187	2,645,673	388,706	15%
All Districts	15,419	48,698,476	6,622,178	14%
Non-RLIS Rural Districts	8,131	9,232,436	1,300,255	14%

	2006–07			
	N	Total Student Population	Students Who Qualify	Percentage of Students Who Qualify
RLIS Districts	1,253	2,759,522	406,851	15%
All Districts	13,945	46,168,379	6,183,357	14%
Non-RLIS Rural Districts	7,175	8,673,409	1,230,813	14%

Exhibit reads: In 2003–04, 1,241 RLIS districts reported data on both total student population and the number of students with Individualized Education Programs. In those districts, there were 2,795,666 students total and 429,531 students had IEPs, about 15 percent of students total.

Source: Common Core of Data.

APPENDIX B: STUDENT ACHIEVEMENT TECHNICAL APPENDIX

The appendix provides a description of the data used and the analysis techniques employed in Chapter 4 of this report.

AYP Status in RLIS Districts

**Exhibit B-1
Mathematics Proficiency Status by Ethnic and Racial Group,
RLIS Districts by Number and Percentage, 2007–08**

	Not Applicable or Too Few Students for Reliability	Not Met	Met Because of Safe Harbor	Met	N
White	5.2%	3.0%	1.0%	90.9%	1,151
Black	45.6%	12.3%	6.5%	35.6%	1,047
Hispanic	55.5%	3.2%	0.6%	40.8%	1,033
Asian/Pacific Islander	78.9%	0.5%	0.1%	20.5%	824
American Indian/Alaskan Native	70.0%	2.3%	0.8%	26.9%	866

Exhibit reads: In 2007–08, about 5.2 percent of RLIS districts had no or too few white students to report proficiency in mathematics and 3.0 percent of districts did not meet AYP targets for white students.

Source: EDEN-ED *Facts*; National Longitudinal School-Level State Assessment Score Database (NLSLSASD); Common Core of Data.

Exhibit B-2
Reading Proficiency Status by Ethnic and Racial Group,
RLIS Districts by Number and Percentage, 2007–08

	Not Applicable or Too Few Students for Reliability	Not Met	Met Because of Safe Harbor	Met	N
White	5.7%	1.7%	0.3%	92.4%	1,077
Black	44.4%	8.9%	3.4%	43.3%	977
Hispanic	53.8%	5.5%	0.8%	39.9%	966
Asian/Pacific Islander	78.4%	0.6%	0.3%	20.7%	781
American Indian/Alaskan Native	68.4%	2.9%	0.5%	28.2%	817

Exhibit reads: In 2007–08, about 5.7 percent of RLIS districts had no or too few white students to report proficiency in reading, and 1.7 percent did not meet AYP targets.

Source: EDEN-ED*Facts*; National Longitudinal School-Level State Assessment Score Database (NLSLSASD); Common Core of Data.

Data Specifications for the Analyses of Student Achievement

This section first discusses all common elements of the achievement analyses including: missing data; sample sizes; calculating proficiency ratings; computing z-scores; interpreting impact estimates; calculating covariates; testing covariates; assessing dosage; and data used in the analysis.

Missing Data. Examination of the missing data revealed that approximately 55–56 percent of the raw data were complete for all variables included in the modeling. Exhibit B-3 shows these numbers.

Exhibit B-3
Number of Data Points by Subject Area With Data on All Covariates

Subject	Number of Data Points	Percentage by Subject
Math	33,127	56%
Read	32,342	55%

Exhibit reads: There were 33,127 data points for mathematics achievement (across six years of data) for which there were also data on all covariates. This number represents approximately 56 percent of all mathematics data.

Source: EDEN-ED*Facts*; National Longitudinal School-Level State Assessment Score Database (NLSLSASD); Common Core of Data; RLIS Program Data.

The following four exhibits show the patterns of missingness in the data broken down by subject and RLIS status. Missingness was examined across all six years of data. These tables illustrate several findings:

- Data were available for a greater percentage of total RLIS than non-RLIS rural districts (in both mathematics and reading).
- Imputing the missing covariates for the RLIS districts with achievement data would not have added a substantial number of data points to the analysis.
- The number of districts without covariate data is larger for the non-RLIS rural districts than the RLIS districts.
- For mathematics, data were available for approximately 68 percent of RLIS districts and 55 percent of non-RLIS districts (see Exhibits B-4 and B-5).
- For reading, data were available for approximately 65 percent of RLIS districts and 53 percent of non-RLIS districts (see Exhibits B-6 and B-7).

Exhibit B-4
Patterns of Missing Data for RLIS Districts
With and Without Proficiency Data in Mathematics, 2002–08

Missing Data Patterns							
Math z-score	Percent LEP	Percent Minority	Percent Poverty	Percent Special Ed.	Average Total Students	Frequency	Percent of Total
<i>With Mathematics Score</i>							
X	X	X	X	X	X	5,317	67.5%
X	X	X	.	X	X	7	0.09%
X	X	X	.	.	X	1	0.01%
X	.	X	X	X	X	43	0.55%
						5,368	68.15%
<i>Without Mathematics Score</i>							
.	X	X	X	X	X	2,462	31.26%
.	X	X	X	.	X	1	0.01%
.	X	X	.	X	X	22	0.28%
.	X	X	.	.	X	2	0.03%
.	.	X	X	X	X	9	0.11%
.	.	X	X	.	X	5	0.06%
.	.	.	.	X	X	2	0.03%
						2,503	31.78%

Exhibit reads: For RLIS districts with proficiency data in mathematics, data were available on all variables (Math z-score, Percent Minority, Percent LEP, Percent Special Education, and total students) for 5,317 districts, about 68 percent of total districts in the dataset.

Source: EDEN-ED*Facts*; National Longitudinal School-Level State Assessment Score Database (NLSLSASD); Common Core of Data; RLIS Program Data.

Exhibit B-5
Patterns of Missing Data for Non-RLIS Rural Districts
With and Without Proficiency Data in Mathematics, 2002–08

Missing Data Patterns							
Math z-score	Percent LEP	Percent Minority	Percent Poverty	Percent Special Ed.	Average Total Students	Frequency	Percent of Total
<i>With Mathematics Score</i>							
X	X	X	X	X	X	27,810	54.51%
X	X	X	X	.	X	1	<.01%
X	X	X	.	X	X	915	1.79%
X	X	X	.	.	X	46	0.09%
X	.	X	X	X	X	303	0.59%
X	.	X	X	.	X	3	0.01%
X	.	X	.	X	X	78	0.15%
X	.	X	.	.	X	5	0.01%
X	.	.	.	.	X	3	0.01%
						29,164	57.16%
<i>Without Mathematics Score</i>							
.	X	X	X	X	X	17,686	34.66%
.	X	X	X	.	X	13	0.03%
.	X	X	.	X	X	1,740	3.41%
.	X	X	.	.	X	224	0.44%
.	.	X	X	X	X	64	0.13%
.	.	X	X	.	X	4	0.01%
.	.	X	.	X	X	290	0.57%
.	.	X	.	.	X	292	0.57%
.	.	.	.	.	X	1,039	2.04%
O	O	O	O	O	O	506	0.99%
						21,858	42.85%

Exhibit reads: For non-RLIS rural districts with proficiency data in mathematics, data were available on all variables (Math z-score, Percent Minority, Percent LEP, Percent Special Education, and total students) for 27,810 districts, about 55 percent of total districts in the dataset.

Source: EDEN-ED*Facts*; National Longitudinal School-Level State Assessment Score Database (NLSLSASD); Common Core of Data; RLIS Program Data.

Exhibit B-6
Patterns of Missing Data for RLIS Districts
With and Without Proficiency Data in Reading, 2002–08

Missing Data Patterns							
Read z-score	Percent LEP	Percent Minority	Percent Poverty	Percent Special Ed.	Average Total Students	Frequency	Percent of Total
<i>With Reading Score</i>							
X	X	X	X	X	X	5,079	64.48%
X	X	X	.	X	X	7	0.09%
X	X	X	.	.	X	1	0.01%
X	.	X	X	X	X	43	0.55%
						5,130	65.13%
<i>Without Reading Score</i>							
.	X	X	X	X	X	2,700	34.28%
.	X	X	X	.	X	1	0.01%
.	X	X	.	X	X	22	0.28%
.	X	X	.	.	X	2	0.03%
.	.	X	X	X	X	9	0.11%
.	.	X	X	.	X	5	0.06%
.	.	.	.	X	X	2	0.03%
O	O	O	O	O	O	6	0.08%
						2,747	34.88%

Exhibit reads: For RLIS districts with proficiency data in reading, data were available on all variables (Read z-score, Percent Minority, Percent LEP, Percent Special Education, and total students) for 5,079 districts, about 65 percent of total districts in the dataset.

Source: EDEN-ED*Facts*; National Longitudinal School-Level State Assessment Score Database (NLSLSASD); Common Core of Data; RLIS Program Data.

Exhibit B-7
Patterns of Missing Data for Non-RLIS Rural Districts
With and Without Proficiency Data in Reading, 2002–08

Missing Data Patterns							
Read z-score	Percent LEP	Percent Minority	Percent Poverty	Percent Special Ed	Average Total Students	Frequency	Percent of Total
<i>With Reading Score</i>							
X	X	X	X	X	X	27,263	53.43%
X	X	X	X	.	X	1	0.00%
X	X	X	.	X	X	905	1.77%
X	X	X	.	.	X	44	0.09%
X	.	X	X	X	X	303	0.59%
X	.	X	X	.	X	3	0.01%
X	.	X	.	X	X	78	0.15%
X	.	X	.	.	X	5	0.01%
X	.	.	.	.	X	3	0.01%
						28,605	56.06%
<i>Without Reading Score</i>							
.	X	X	X	X	X	18,233	35.74%
.	X	X	X	.	X	13	0.03%
.	X	X	.	X	X	1,750	3.43%
.	X	X	.	.	X	226	0.44%
.	.	X	X	X	X	64	0.13%
.	.	X	X	.	X	4	0.01%
.	.	X	.	X	X	290	0.57%
.	.	X	.	.	X	292	0.57%
.	.	.	.	.	X	1,039	2.04%
O	O	O	O	O	O	506	0.99%
						22,417	43.95%

Exhibit reads: For non-RLIS Rural districts with proficiency data in reading, data were available on all variables (Math z-score, Percent Minority, Percent LEP, Percent Special Education, and total students) for 27,263 districts, about 53 percent of total districts in the dataset.

Source: EDEN-ED*Facts*; National Longitudinal School-Level State Assessment Score Database (NLSLSASD); Common Core of Data; RLIS Program Data.

Sample Sizes. Below is a comparison of the number of districts included (and not included) in the analyses.

All longitudinal models included only districts with a 6, 7, or 8 locale code. Exhibit B-8 below shows the breakdown of districts in the three following categories:

- RLIS districts with a 6, 7, or 8 locale code.
- Non RLIS districts with a 6, 7, or 8 locale code.

Exhibit B-8
Overall Sample Sizes, NCES Codes 6, 7, and 8

School Year	RLIS 6, 7, 8	Non RLIS 6, 7, 8
2002–03	1,729	8,747
2003–04	1,299	9,186
2004–05	1,127	8,250
2005–06	1,188	8,506
2006–07	1,287	8,461
2007–08	1,247	7,872
<i>Total</i>	<i>7,877</i>	<i>51,022</i>

Exhibit reads: In 2002–03, there were 1,729 districts that received RLIS funds, and 8,747 rural districts that did not receive RLIS funds.

Note: The sample sizes for NCES Codes 6, 7, and 8 reflect the number of districts that were eligible for RLIS funds in each school year.

Source: EDEN-ED*Facts*; National Longitudinal School-Level State Assessment Score Database (NLSLSASD); Common Core of Data.

Calculating Proficiency Ratings. Achievement data for the first three years of the longitudinal analysis came from National Longitudinal School-Level Assessment Score Database (NLSLSASD) and for the last three years from EDEN/ED*Facts*. The NLSLSASD proficiency percentages were available separately for each grade. Percent proficient per district was therefore calculated by dividing the total number of proficient students (for all grades) by the total number of students (for all grades):

$$\text{Percent Proficient} = \text{Total-number-proficient} / \text{Total-number-students}$$

Computing z-scores. Data on percent proficient for each district were used as a measure of academic achievement. These data were transformed into z-scores for each year over the five-year period of 2002–03 through 2007–08. The values for the z-scores were computed by taking the proficiency rating for each school district and subtracting the overall average proficiency rating of all districts in that state and then dividing that difference by the standard deviation of proficiency ratings for all districts in that state.

$$z\text{-score}_{ij} = (\text{District Proficiency}_{ij} - \text{Average State Proficiency}_{0j}) / \text{State Proficiency std dev}_{0j}$$

Interpreting Impact Estimates. Because data were analyzed using z-scores, changes in the estimates represent changes in units of a standard deviation. For example, a difference of 0.5 in average academic achievement between RLIS and non-RLIS districts represents a difference of one-half of one standard unit (or standard deviation).

The process of understanding an estimate of the rate of change in academic achievement is similar. For example, an estimate of 0.5 indicates that with every unit increase in the predictor there will be a one-half standard unit change in academic achievement.

Calculating Covariates. Data were not available for each year on all covariates; therefore, average values were calculated using the available data across all years. Averages were calculated by summing over the data numerators and denominators. For example, percent Special Education was calculated by taking the following steps:

1. Taking the sum of the number of special education students in each district for each year that data were available to create the numerator;
2. Taking the sum of the number of total students (using grade data) in each district for each year that data were available to create the denominator;
3. Removing cases in which the numerator or the denominator had a missing value (however, values of zero in the numerator were left in); and
4. Dividing the numerator by the denominator to get a percent value.

These same steps were taken for all covariates. One additional step was taken to calculate the percent minority. Because data were provided in counts of students by race and ethnicity, a sum of all nonwhite students was first calculated. These values (for each district) were then used to calculate the overall (numerator) for percent minority.

Testing Covariates. In order to ascertain whether or not using the average values for covariates would be suitable for modeling, we tested if there were significant differences in the *actual* values for each year that data were available.

Each covariate was modeled separately taking the form of two-level models with time nested in districts.

Level 1:

$$Cov_{ij} = \beta_{0j} + \beta_{1j}(time) + r_{ij}$$

Level 2:

$$\beta_{0j} = \pi_{00} + u_{0j}$$

$$\beta_{1j} = \pi_{10}$$

The results indicated that although there were significant differences between the adjusted means at the different times points (for some of the covariates) these differences were not functionally meaningful. For example, the percent minority was different among the years; however, those differences are all in the thousands of a percent. Total students also differed significantly among the time points of measurement; however, the significant differences ranged from 5–8 students.

Assessing Dosage: Dosage was treated as a categorical variable allowing us to test for the differences between receiving one to six years of RLIS funding and not receiving any funding at all.

Data Used in the Analysis. Data were included in the analysis for all years available during the years 2002–03 through 2007–08 for all districts with a locale code of 6, 7, or 8.

Longitudinal Analyses

The longitudinal models compared trends in student achievement in RLIS districts that those in non-RLIS districts controlling for several covariates. There were a number of models constructed and compared, thereby increasing confidence in the estimates provided.

For the longitudinal analysis that did not include the dosage variable, we compared models based on three different methods of assignment of the RLIS indicator variable. Inspection of RLIS program data indicated that RLIS status changed over the years. In case there was an issue with the quality of this important piece of the data, several models were constructed which assigned the RLIS indicator variables in one of the following ways:

- Always-RLIS: Assigned RLIS status only if a district received RLIS funding in every year.
- Ever-RLIS: Assigned RLIS status if a district received in at least one year.
- Changing-RLIS: Assigned RLIS status differently for each year, solely based on the program office eligibility data.

All models were two-level with a random component at level 1 and at level 2 for the intercepts and time (slope).¹⁴

Final Longitudinal Models. The final longitudinal models for both reading and mathematics were two-level models with time nested in districts. The RLIS indicator variable was included as a level one variable allowing RLIS status to change with each time point (according to the data).

Level 1

$$y_{ij} = \beta_{0j} + \beta_{1j}(time_{ij}) + \beta_{2j}(RLIS_status_{ij}) + \beta_{3j}(time_{ij})(RLIS_status) + r_{ij}$$

Level 2

$$\beta_{0j} = \pi_{00} + \pi_{01}(Pov_j) + \pi_{02}(Min_j) + \pi_{03}(SpEd_j) + \pi_{04}(Total_st_j) + \pi_{05}(LEP_j) + u_{0j}$$

$$\beta_{1j} = \pi_{10} + u_{1j}$$

$$\beta_{2j} = \pi_{20}$$

$$\beta_{3j} = \pi_{30}$$

The following set of tables (Exhibits B-9 through B-14) show the comparison of using different RLIS indicator variables in modeling mathematics and reading achievement over time. As can be seen in these tables, although the coefficients change slightly, the significance of the treatment gains (change over time) is nearly identical in all cases.

Using the model that contains the variable that allows RLIS status to change over time, the following findings emerge:

- In mathematics, the rate of change for RLIS districts is slightly greater (0.03) than in non-RLIS districts ($t=4.50$, $p<.0001$). See Exhibit B-9.
- In reading, the rate of change for RLIS districts is slightly greater (0.032) than in non-RLIS districts ($t=3.31$; $p=.0009$). See Exhibit B-12.

¹⁴ Examination of the variance estimates for three-level models indicated that there was not a significant amount of residual variance among the states and, as such, models were constructed as two-level.

Exhibit B-9
Results of Modeling Mathematics Achievement
Using the *Ever-RLIS* Indicator Variable

Effect	Estimate	Std Error	DF	t Value	Pr > |t|
Intercept (non-rlis)	0.08	0.01	8895	5.81	<.0001
Difference at Time 0	-0.15	0.03	8895	-5.16	<.0001
<i>Slope over time</i>					
Non-RLIS	-0.01	0.00	24000	-3.00	0.0027
Trt effect (rlis)	0.03	0.01	24000	4.97	<.0001
<i>Covariates</i>					
Poverty	-1.06	0.17	8895	-6.05	<.0001
Minority	-0.90	0.05	8895	-18.95	<.0001
Spec. Ed.	-2.41	0.16	8895	-15.40	<.0001
Total Students	0.00004	0.000004	8895	9.38	<.0001
Limited English Prof.	-0.52	0.11	8895	-4.59	<.0001

Exhibit reads: The estimate for the intercept in 2002–03 for non-RLIS districts is 0.08, with a standard error of 0.01. The degrees of freedom for this estimate are 8,895 and the t-value is 5.81 with an associated probability of $p < .0001$.

Source: EDEN-ED*Facts*; National Longitudinal School-Level State Assessment Score Database (NLSLSASD); Common Core of Data; RLIS Program Data.

Exhibit B-10
Results of Modeling Mathematics Achievement
Using the *Always-RLIS* Indicator Variable

Effects	Estimate	Std Error	DF	t Value	Pr > |t|
Intercept (non-rlis)	0.07	0.01	7697	4.90	<.0001
Difference at Time 0	-0.04	0.05	7697	-0.93	0.3532
<i>Slope over time</i>					
Non-RLIS	-0.01	0.00	21000	-2.95	0.0031
Trt effect (rlis)	0.03	0.01	21000	3.87	0.0001
<i>Covariates</i>					
Poverty	-1.45	0.21	7697	-7.06	<.0001
Minority	-0.92	0.05	7697	-17.48	<.0001
Spec. Ed.	-2.42	0.17	7697	-14.57	<.0001
Total Students	0.00003	0.000004	7697	7.78	<.0001
Limited English Prof.	-0.48	0.12	7697	-3.89	0.0001

Exhibit reads: The estimate for the intercept in 2002–03 for non-RLIS districts is 0.07, with a standard error of 0.01. The degrees of freedom for this estimate are 7,697 and the t-value is 4.90 with an associated probability of $p < .0001$.

Source: EDEN-ED*Facts*; National Longitudinal School-Level State Assessment Score Database (NLSLSASD); Common Core of Data; RLIS Program Data.

Exhibit B-11
Results of Modeling Mathematics Achievement
Using the *Changing-RLIS* Indicator Variable

Effect	Estimate	Std Error	DF	t Value	Pr > |t|
Intercept (non-rlis)	0.05	0.01	8896	4.49	<.0001
Difference at Time 0	-0.07	0.02	787	-3.27	0.0011
<i>Slope over time</i>					
Non-RLIS	-0.01	0.003	24000	-2.33	0.0196
Trt effect (rlis)	0.03	0.01	24000	4.50	<.0001
<i>Covariates</i>					
Poverty	-1.35	0.16	8896	-8.51	<.0001
Minority	-0.90	0.05	8896	-18.89	<.0001
Spec. Ed.	-2.40	0.16	8896	-15.38	<.0001
Total Students	0.00003	0.000004	8896	9.07	<.0001
Limited English Prof.	-0.48	0.11	8896	-4.24	<.0001

Exhibit reads: The estimate for the intercept in 2002–03 for non-RLIS districts is 0.05, with a standard error of 0.01. The degrees of freedom for this estimate are 8,896 and the t-value is 4.49 with an associated probability of $p < .0001$.

Source: EDEN-ED*Facts*; National Longitudinal School-Level State Assessment Score Database (NLSLSASD); Common Core of Data; RLIS Program Data.

Exhibit B-12
Results of Modeling Reading Achievement
Using the *Ever-RLIS* Indicator Variable

Effect	Estimate	Std Error	DF	t Value	Pr > |t|
Intercept (non-rlis)	0.06	0.01	8892	4.55	<.0001
Difference at Time 0	-0.09	0.03	8892	-3.17	0.0015
<i>Slope over time</i>					
Non-RLIS	-0.01	0.003	23000	-2.63	0.0084
Trt effect (rlis)	0.02	0.01	23000	2.77	0.0056
<i>Covariates</i>					
Poverty	-1.28	0.17	8892	-7.59	<.0001
Minority	-0.92	0.05	8892	-20.10	<.0001
Spec. Ed.	-2.70	0.15	8892	-17.89	<.0001
Total Students	0.00003	0.000004	8892	8.68	<.0001
Limited English Prof.	-1.08	0.11	8892	-9.84	<.0001

Exhibit reads: The estimate for the intercept in 2002–03 for non-RLIS districts is 0.06, with a standard error of 0.01. The degrees of freedom for this estimate are 8,892 and the t-value is 4.55 with an associated probability of $p < .0001$.

Source: EDEN-ED*Facts*; National Longitudinal School-Level State Assessment Score Database (NLSLSASD); Common Core of Data; RLIS Program Data.

Exhibit B-13
Results of Modeling Reading Achievement
Using the *Always-RLIS* Indicator Variable

Effect	Estimate	Std Error	DF	t Value	Pr > |t|
Intercept (non-rlis)	0.05	0.01	7695	3.52	0.0004
Difference at Time 0	0.05	0.05	7695	1.12	0.2616
<i>Slope over time</i>					
Non-RLIS	-0.01	0.00	20000	-2.62	0.0089
Trt effect (rlis)	0.02	0.01	20000	2.10	0.0353
<i>Covariates</i>					
Poverty	-1.80	0.20	7695	-9.07	<.0001
Minority	-0.94	0.05	7695	-18.49	<.0001
Spec. Ed.	-2.73	0.16	7695	-17.09	<.0001
Total Students	0.00003	0.000004	7695	7.19	<.0001
Limited English Prof.	-1.01	0.12	7695	-8.59	<.0001

Exhibit reads: The estimate for the intercept in 2002–03 for non-RLIS districts is 0.05, with a standard error of 0.01. The degrees of freedom for this estimate are 7,695 and the t-value is 3.52 with an associated probability of p=.0004.

Source: EDEN-ED*Facts*; National Longitudinal School-Level State Assessment Score Database (NLSLSASD); Common Core of Data; RLIS Program Data.

Exhibit B-14
Results of Modeling Reading Achievement
Using the *Changing-RLIS* Indicator Variable

Effect	Estimate	Std Error	DF	t Value	Pr > |t|
Intercept (non-rlis)	0.05	0.01	8893	3.95	<.0001
Difference at Time 0	-0.05	0.02	756	-2.18	0.0299
<i>Slope over time</i>					
Non-RLIS	-0.01	0.00	23000	-2.63	0.0086
Trt effect (rlis)	0.02	0.01	23000	3.31	0.0009
<i>Covariates</i>					
Poverty	-1.50	0.16	8893	-9.63	<.0001
Minority	-0.92	0.05	8893	-20.06	<.0001
Spec. Ed.	-2.70	0.15	8893	-17.88	<.0001
Total Students	0.00003	0.000004	8893	8.42	<.0001
Limited English Prof.	-1.05	0.11	8893	-9.60	<.0001

Exhibit reads: The estimate for the intercept in 2002–03 for non-RLIS districts is 0.05, with a standard error of 0.01. The degrees of freedom for this estimate are 8,893 and the t-value is 3.95 with an associated probability of $p < .0001$.

Source: EDEN-ED*Facts*; National Longitudinal School-Level State Assessment Score Database (NLSLSASD); Common Core of Data; RLIS Program Data.

Exhibit B-15 shows the average proficiency rating for the RLIS and non-RLIS (rural and not rural) districts for each year from 2002–03 through 2007–08.

Exhibit B-15
Average Mathematics and Reading Proficiency by Group, 2002–08

School Year	Variable	RLIS, 678				Non RLIS, 678			
		N Obs	N	Mean (%)	Std Dev	N Obs	N	Mean (%)	Std Dev
2002–03	Ave. Prof. Math	1729	838	0.50	0.20	8747	3645	0.57	0.21
	Ave. Prof. Read		765	0.64	0.17		3303	0.69	0.14
2003–04	Ave. Prof. Math	1299	578	0.47	0.22	9186	3831	0.59	0.21
	Ave. Prof. Read		496	0.63	0.19		3648	0.71	0.15
2004–05	Ave. Prof. Math	1127	643	0.48	0.23	8250	3317	0.62	0.21
	Ave. Prof. Read		559	0.65	0.19		3259	0.74	0.15
2005–06	Ave. Prof. Math	1188	912	0.61	0.17	8506	5100	0.65	0.19
	Ave. Prof. Read		912	0.67	0.16		5100	0.71	0.18
2006–07	Ave. Prof. Math	1287	1238	0.64	0.16	8461	6920	0.69	0.18
	Ave. Prof. Read		1237	0.68	0.16		6905	0.72	0.17
2007–08	Ave. Prof. Math	1247	1160	0.63	0.18	7872	6376	0.70	0.18
	Ave. Prof. Read		1160	0.67	0.19		6367	0.75	0.17

Exhibit reads: For the 2002–03 school year, data were available for 1,729 RLIS districts. There were data for 838 districts in Mathematics proficiency, and the average Mathematics proficiency for these RLIS districts was .50 (with a standard deviation of .20). There were data for 765 districts in Reading proficiency, and the average Reading proficiency for these RLIS districts was .64 (with a standard deviation of .17).

Source: EDEN-ED*Facts*; National Longitudinal School-Level State Assessment Score Database (NLSLSASD); Common Core of Data.

Analysis of Districts with Six Years of Data

Because there was a substantial amount of missing data and the source for the outcome measure changed midpoint during the data collection period, there was some concern that those districts submitting data to the two systems could be systematically different thereby skewing the final results. Therefore, we conducted an additional analysis looking only at those districts that have six years of data. The models for the mathematics and reading achievement were the same as those used for the main analysis. Time was nested within district and the RLIS indicator variable was treated as time variant. The final data sets included approximately 20 percent of the districts in the full data set.

Results are similar to those from the models that use the full data sets.

- In mathematics, the rate of change for RLIS districts is slightly greater (0.02) than in non-RLIS districts ($t=2.80$, $p=.038$). See Exhibit B-16.
- In reading, the rate of change for RLIS districts is slightly greater (0.03) than in non-RLIS districts ($t=2.60$; $p=.009$). See Exhibit B-17.

Exhibit B-16
Results of Modeling Mathematics Achievement
Using Only Those Districts With Six Years of Data

Effect	Estimate	Std Error	DF	t Value	Pr > |t|
Intercept (non-rlis)	0.04	0.02	2033	2.04	0.0413
Difference at Time 0	-0.07	0.03	275	-2.10	0.0369
<i>Slope over time</i>					
Non-RLIS	-0.01	0.00	10000	-1.66	0.0964
Trt effect (rlis)	0.02	0.01	10000	2.08	0.0378
<i>Covariates</i>					
Poverty	-1.47	0.28	2033	-5.24	<.0001
Minority	-0.33	0.10	2033	-3.46	0.0006
Spec. Ed.	-2.40	0.38	2033	-6.35	<.0001
Total Students	0.00005	0.000016	2033	3.25	0.0012
Limited English Prof.	-1.89	0.25	2033	-7.60	<.0001

Exhibit reads: The estimate for the intercept in 2002–03 for non-RLIS districts is 0.04, with a standard error of 0.02. The degrees of freedom for this estimate are 2,033 and the t-value is 2.04 with an associated probability of $p=.0413$.

Source: EDEN-EDFacts; National Longitudinal School-Level State Assessment Score Database (NLSLSASD); Common Core of Data; RLIS Program Data.

Exhibit B-17
Results of Modeling Reading Achievement
Using Only Those Districts With Six Years of Data

Effect	Estimate	Std Error	DF	t Value	Pr > |t|
Intercept (non-rlis)	0.05	0.02	1647	2.54	0.0112
Difference at Time 0	-0.10	0.04	221	-2.71	0.0072
<i>Slope over time</i>					
Non-RLIS	-0.01	0.00	8262	-2.10	0.0356
Trt effect (rlis)	0.03	0.01	8262	2.60	0.0092
<i>Covariates</i>					
Poverty	0.27	0.31	1647	0.86	0.3878
Minority	-0.80	0.10	1647	-8.18	<.0001
Spec. Ed.	-4.98	0.43	1647	-11.66	<.0001
Total Students	0.00001	0.000016	1647	0.57	0.5715
Limited English Prof.	-2.41	0.23	1647	-10.38	<.0001

Exhibit reads: The estimate for the intercept in 2002–03 for non-RLIS districts is 0.05, with a standard error of 0.02. The degrees of freedom for this estimate are 1,647 and the t-value is 2.54 with an associated probability of $p=.0112$.

Source: EDEN-ED*Facts*; National Longitudinal School-Level State Assessment Score Database (NLSLSASD); Common Core of Data; RLIS Program Data.

Dosage Analysis

In order to examine the association between various years of receiving RLIS funds and student achievement we chose to model dosage as a categorical variable. This treatment of the variable allowed us to compare receiving one to six years of funding to not receiving any funding at all. Because the results suggest that receiving the funding for five or six years (depending on the subject tested) was related to increased student achievement we did not look at additional comparisons such as receiving the funding for one versus two years or three years.

Final Dosage Models: The data were fit as two-level longitudinal models with level 1 representing time and level 2 representing districts. Covariates and dosage levels were entered into the model as level 2 variables. The models fit for both math and reading were as follows:

Level 1

$$y_{ij} = \beta_{0j} + \beta_{1j}(\text{time}_{ij}) + r_{ij}$$

Level 2

$$\begin{aligned}\beta_{0j} &= \pi_{00} + \pi_{01}(\text{Pov}_j) + \pi_{02}(\text{Min}_j) + \pi_{03}(\text{SpEd}_j) + \pi_{04}(\text{Total_st}_j) + \pi_{05}(\text{LEP}_j) \\ &\quad + \sum \pi_{0p}(\text{Dosage}_j) + u_{0j} \\ \beta_{1j} &= \pi_{10} + \sum \pi_{2p}(\text{Dosage}_j) + u_{1j}\end{aligned}$$

Exhibit B-20 shows the average proficiencies in mathematics and reading in terms of average percent proficient, standard deviation and sample sizes for each year and each level of RLIS dosage. The data is disaggregated into dosage groups: districts that did not receive RLIS funding and districts that received one to six years of RLIS funding between 2002 and 2008.

Exhibit B-18
Average Proficiency for Mathematics and Reading
for Non-RLIS and RLIS Districts by Year and Dosage

School Year	Variable	Non-RLIS				One Year				2 years			
		N Obs	N	Mean (%)	Std Dev	N Obs	N	Mean (%)	Std Dev	N Obs	N	Mean (%)	Std Dev
2002-03	Ave. Prof. Math	8330	3447	0.57	0.21	601	272	0.54	0.18	264	125	0.50	0.22
	Ave. Prof. Read		3130	0.70	0.14		255	0.67	0.13		110	0.64	0.18
2003-04	Ave. Prof. Math	8371	3438	0.60	0.21	570	254	0.58	0.19	263	113	0.50	0.23
	Ave. Prof. Read		3268	0.71	0.15		239	0.69	0.14		97	0.66	0.19
2004-05	Ave. Prof. Math	7425	2847	0.63	0.21	521	269	0.63	0.18	161	88	0.52	0.23
	Ave. Prof. Read		2832	0.75	0.14		254	0.73	0.13		75	0.68	0.16
2005-06	Ave. Prof. Math	7725	4590	0.65	0.19	525	339	0.63	0.16	166	116	0.61	0.17
	Ave. Prof. Read		4590	0.72	0.18		339	0.69	0.17		116	0.68	0.15
2006-07	Ave. Prof. Math	7773	6251	0.69	0.18	527	502	0.68	0.15	171	164	0.66	0.16
	Ave. Prof. Read		6266	0.73	0.17		502	0.70	0.15		164	0.69	0.14
2007-08	Ave. Prof. Math	7159	5822	0.70	0.19	520	380	0.68	0.16	167	140	0.65	0.17
	Ave. Prof. Read		5831	0.75	0.17		380	0.72	0.16		140	0.69	0.16

(Continues on next page)

Exhibit B-18 (continued)
Average Proficiency for Mathematics and Reading
for Non-RLIS and RLIS Districts by Year and Dosage

School Year	Variable	3 years				4 years				5 years				6 years			
		N Obs	N	Mean (%)	Std Dev	N Obs	N	Mean (%)	Std Dev	N Obs	N	Mean (%)	Std Dev	N Obs	N	Mean (%)	Std Dev
2002-03	Ave. Prof. Math	122	56	0.44	0.21	186	80	0.48	0.22	233	148	0.45	0.23	740	355	0.48	0.22
	Ave. Prof. Read		50	0.59	0.20		71	0.64	0.17		137	0.62	0.17		315	0.63	0.19
2003-04	Ave. Prof. Math	121	54	0.49	0.23	187	89	0.47	0.21	233	127	0.45	0.22	740	334	0.48	0.22
	Ave. Prof. Read		48	0.61	0.21		81	0.60	0.20		116	0.63	0.18		295	0.63	0.19
2004-05	Ave. Prof. Math	118	73	0.52	0.22	183	96	0.51	0.22	229	145	0.50	0.22	740	442	0.48	0.24
	Ave. Prof. Read		67	0.62	0.21		83	0.65	0.20		135	0.64	0.18		372	0.65	0.19
2005-06	Ave. Prof. Math	120	83	0.59	0.17	185	141	0.58	0.19	233	174	0.64	0.16	740	569	0.60	0.17
	Ave. Prof. Read		83	0.66	0.17		141	0.65	0.18		174	0.72	0.16		569	0.66	0.16
2006-07	Ave. Prof. Math	122	110	0.63	0.17	182	173	0.63	0.17	233	229	0.65	0.17	740	713	0.63	0.16
	Ave. Prof. Read		110	0.66	0.17		173	0.68	0.16		229	0.71	0.16		714	0.67	0.16
2007-08	Ave. Prof. Math	120	100	0.62	0.18	182	160	0.63	0.17	231	220	0.67	0.17	740	705	0.62	0.18
	Ave. Prof. Read		100	0.64	0.20		160	0.68	0.18		220	0.72	0.16		705	0.65	0.20

Exhibit reads: For the 2002-03 school year, data were available for 8,330 non-RLIS Rural districts. There were data for 3,477 districts in Mathematics proficiency. The average Mathematics proficiency for these districts was .57 (with a standard deviation of .21). There were data for 3,130 districts in Reading proficiency. The average Reading proficiency for these RLIS districts was .70 (with a standard deviation of .14).

Source: EDEN-ED*facts*; National Longitudinal School-Level State Assessment Score Database (NLSLSASD); Common Core of Data.

Characteristics of RLIS Implementation and Student Achievement

Given the nested structure of the data, a two-level hierarchical linear modeling approach was employed in these analyses. Each model was conceived as having two levels with district (level 1) nested within state (level 2). The variables of interest (goals, activities, and ratings of state technical assistance) were included as level 1 covariates along with the following controls: mathematics achievement in 2002–03, reading achievement in 2002–03, district size, years receiving RLIS funds, and locale code.

The model examining the relationship between identifying an RLIS goal as an area of focus and student achievement was conceptualized as:

Level 1

$$y_{ij} = \beta_{0j} + \beta_{1j}(\text{mathpre}_{ij}) + \beta_{2j}(\text{readingpre}_{ij}) + \beta_{3j}(\text{districtsize}) + \beta_{4j}(\text{RLISyears}) + \beta_{5j}(\text{RLISgoals}) + \beta_{6j}(\text{Locale}) + r_{ij}$$

Level 2

$$\beta_{0j} = \pi_{00} + \pi_{01}(\text{region}) + u_{0j}$$

$$\beta_{1j} = \pi_{10}$$

$$\beta_{2j} = \pi_{20}$$

$$\beta_{3j} = \pi_{30}$$

$$\beta_{4j} = \pi_{40}$$

$$\beta_{5j} = \pi_{50} + \pi_{51}(\text{region}) + u_{5j}$$

$$\beta_{6j} = \pi_{60}$$

The model examining the relationship between implementing particular RLIS activities and student achievement was conceptualized as follows.

Level 1

$$y_{ij} = \beta_{0j} + \beta_{1j}(\text{mathpre}_{ij}) + \beta_{2j}(\text{readingpre}_{ij}) + \beta_{3j}(\text{districtsize}) + \beta_{4j}(\text{RLISyears}) + \beta_{5j}(\text{RLISactivities}) + \beta_{6j}(\text{Locale}) + r_{ij}$$

Level 2

$$\beta_{0j} = \pi_{00} + \pi_{01}(\text{region}) + u_{0j}$$

$$\beta_{1j} = \pi_{10}$$

$$\beta_{2j} = \pi_{20}$$

$$\beta_{3j} = \pi_{30}$$

$$\beta_{4j} = \pi_{40}$$

$$\beta_{5j} = \pi_{50} + \pi_{51}(\text{region}) + u_{5j}$$

$$\beta_{6j} = \pi_{60}$$

APPENDIX C: STATE COORDINATOR INTERVIEW GUIDE

Evaluation of the Implementation of the Rural and Low-Income School (RLIS) Program

Introduction

1. How long have you been the RLIS/REAP state coordinator?

NOTE: IF THE STATE COORDINATOR HAS BEEN IN THE JOB SIX MONTHS OR LESS, ASK: Is the previous state coordinator available for us to talk to if there are questions that should more appropriately be answered by him or her?

- *(If yes)* Could you let us know if we come to any such questions, so we can ask them of the previous state coordinator instead?
 - *(If no)* Could you please go ahead and answer any such questions to the best of your ability? We understand if your knowledge of past decisions or activities is incomplete.
2. Please describe your role and responsibilities in administering the RLIS Program.
 3. Have your role and/or responsibilities changed over time? *(If so)* Please describe.

Goals and Priorities

Next, we would like to ask about the goals and priorities of your state's RLIS Program.

4. What are the current goals and priorities of your state's RLIS Program?

PROBE:

- Are the current goals and priorities of your state's RLIS Program intended to address specific challenges faced by rural districts in your state?
5. Have the goals and priorities of your state's RLIS Program changed over time?
(If yes) What goals changed, and why?
 6. Are future reassessments of your state's goals planned? *(If yes)* Who would be involved in doing such a reassessment? How would such a reassessment be done?
 7. Do the RLIS-funded districts in your state set their own goals and priorities distinct from those established by the state program? *(If yes)* How do the districts communicate these goals and priorities to you?

Administration

Next, we would like you to describe how the distribution of RLIS funds is administered.

8. How do you notify RLIS-eligible districts as to their eligibility for funds? Have your communication mechanisms changed over time?
9. How does the process by which RLIS funds are distributed to eligible districts fit in with your overall policies and procedures for School Support and Technology Programs and other programs for LEAs?
10. Does your state require the eligible districts to submit an application for or otherwise make a formal request for the RLIS funds? *(If yes)* Please describe the application/request process that must be followed by the districts.
11. Does the state provide any guidance and assistance for eligible districts for completing the application process?
12. Has your process for the distribution of RLIS funds changed over time? *(If yes)* How?

State Monitoring, Technical Assistance, and Evaluation

Now, we would like to ask you some questions regarding your state's processes for monitoring and evaluating the RLIS Program.

13. Do you provide districts with information on the application process, the state's goals and priorities, or guidance on the RLIS Program in general? *(If yes)* Can you share those documents with us?
14. How do you monitor your state's RLIS Program?
15. Do you provide any forms of technical assistance to RLIS districts? *(If yes)* What types of assistance do you offer? Can you share any technical assistance-related documents with us?
16. Have data on the RLIS Program been collected? *(If yes)* Which types? Can you share any of your raw data with us?

PROBE:

- How often are data collected and analyzed?
 - How do you use the data you collect?
 - What staff members are responsible for collecting and analyzing data?
17. Do you conduct evaluations of your state's RLIS Program? *(If yes)* How so? Have you generated any reports or self-evaluations? *(If yes)* Can you share them with us? What have the reports found?

Related State Policies and Initiatives

18. Are there any policy initiatives or funding sources in your state that support, complement, or supplement the RLIS Program? (If yes) Can you describe them for me?

PROBE:

- How are these programs coordinated at the state level?
- Does the state provide guidance and assistance to districts to help them effectively coordinate the funds available from these various programs?

19. Are there any policy initiatives or funding sources in your state that compete with the RLIS Program? (If yes) Can you describe them for me?

Wrap-Up

20. Now that you understand the types of information we are looking for, is there anything else you think we should know about your state's RLIS Program? Do you have any suggestions for improvement of the RLIS Program?

21. I want to confirm that you are going to email/mail me the following documents that we discussed in the interview: (*list documents, such as program data, evaluation data, reports, guidance, etc.*) When should I expect those documents?

22. Do you have any questions about the study?

Thank you for your time!

**Evaluation of the Implementation of the Rural and Low-Income School (RLIS) Program
COVER PAGE FOR STATE COORDINATOR INTERVIEW**

Note: The interview will be scheduled and our study introduced and explained in a set-up call in advance of the interview itself. We will, however, want to review some or all of this information at the time of the interview.

Hello. This is [name], from Berkeley Policy Associates. As we discussed (*refer to last time we spoke*) we are conducting a study under contract with the Policy and Program Studies Service of the U.S. Department of Education to learn about how the Rural and Low-Income School Program is being implemented at the state and local levels. We are particularly interested in learning about your goals and priorities, and uses of funds. As you know, you are one of nine states that have been selected for an in-depth interview regarding your state's RLIS Program. The information you provide will also inform subsequent data collection activities.

(Refer to discussion of interview length held during set-up call.) Our interview will take about one hour—Is this still a good time for you? *(Negotiate new time or divide interview into two sessions as needed.)* Thank you so much for your time; we know how busy you must be.

Please be as honest and candid as possible. Any information regarding your successes and challenges will help us understand the overall picture, and we especially appreciate learning about your experiences—both positive and negative. In our reporting, we will not associate responses or findings with individual names or the names of the states.

We have two interviewers on the line, one asking the questions and the other taking notes, who may ask questions as well. We would like to make a recording of the conversation as a back-up to our note taking; this recording would be erased as soon as we have verified that our notes are complete. Do we have your permission to record our conversation?

There will be time for you to ask questions about the study at the end of the interview, but if you need anything clarified during our discussion, please let us know. Are you ready to begin?

Note: Prior to the interview, we will review written materials on the particular state, and tailor the topic guide slightly as appropriate.

APPENDIX D: DISTRICT COORDINATOR INTERVIEW GUIDE

Evaluation of the Implementation of the Rural and Low-Income School (RLIS) Program

Introduction

1. What is your job title?
2. Please describe your role and responsibilities in administering the RLIS program in your district.
3. How long have you been responsible for administering the RLIS program in your district? Have your role and/or responsibilities changed over time? *(If so)* Please describe.

NOTE: IF IN THIS POSITION SIX MONTHS OR LESS, ASK: Is the person who was previously responsible for administering the RLIS program in your district available to talk if there are questions that should more appropriately be answered by him or her?

- *(If yes)* Could you let us know if we come to any such questions, so we can ask them of the previous state coordinator instead?
- *(If no)* Could you please go ahead and answer any such questions to the best of your ability? We understand if your knowledge of past decisions or activities is incomplete.

Goals and Priorities

Next, we would like to ask about the goals and priorities for your district's RLIS funds that you received for the 2007–2008 school year.

4. What were the goals and priorities for the use of your district's RLIS funds for the 2007–2008 school year?
5. How did you determine what the goals and priorities for your district should be? Do you conduct needs assessments, or other assessments of what your district's needs are? *(If yes)* How often? How do you use the data you collect to determine what the goals and priorities for your district should be?
6. Do you have any documentation of how you determined what the goals and priorities for your district should be, such as needs assessment reports? *(If yes)* Can you share those documents with us?
7. Have the goals and priorities for the use of your district's RLIS funds changed over time? *(If yes)* What goals changed, and why?

8. Are future reassessments of your district's goals planned? (*If yes*) Who would be involved in doing such a reassessment? How would such a reassessment be done?

Uses of Funds

9. How is your district using RLIS funds to achieve the goals you have set? That is, to what specific uses are you putting the RLIS funds?
10. Do you have any documents you could share on 2007–08 RLIS expenditures?
11. Is your district in school improvement? (*If yes*) Are you using RLIS funds to achieve specific goals for school improvement?
12. What progress has your district made toward reaching the goals you have set? How do you measure that progress?

State Monitoring and Technical Assistance

13. Does the state provide any guidance or assistance for applying for RLIS funds? If so, please describe the assistance and how it was used.
14. Does the state provide any guidance or assistance in setting goals related to RLIS and identifying effective strategies for reaching those goals? If so, please describe the assistance and how it was used.
15. Have you received any monitoring visits or been the subject of any other monitoring efforts from your state that are related to your RLIS program during the 2007–08 or the 2008–09 school years? (*If yes*) What did the monitoring consist of, and what were the results as they related to the RLIS program in your district? How often did the monitoring occur?
16. Does the state provide any guidance or assistance in evaluating the RLIS Program at the district level, or in measuring one's progress toward reaching the goals that have been set for your district? If so, please describe the assistance and how it was used.

Wrap-Up

17. Now that you understand the types of information we are looking for, is there anything else you think we should know about your state's RLIS Program?
18. Do you have any suggestions for improvement of the RLIS Program?
19. I want to confirm that you are going to email/mail me the following documents that we discussed in the interview: (*list documents, such as needs assessment reports*) When should I expect those documents?
20. Do you have any questions about the study? Thank you for your time!

Evaluation of the Implementation of the Rural and Low-Income School (RLIS) Program COVER PAGE FOR DISTRICT COORDINATOR INTERVIEW GUIDE

Note: The interview will be scheduled and our study introduced and explained in a set-up call in advance of the interview itself. We will, however, want to review some or all of this information at the time of the interview.

Hello. This is [name], from Berkeley Policy Associates. As we discussed (*refer to last time we spoke*) we are conducting a study under contract with the Policy and Program Studies Service of the U.S. Department of Education to learn about how the Rural and Low-Income Schools Program is being implemented at the state and local levels. We are particularly interested in learning about your goals and priorities and uses of funds. As you know, your district is in one of nine states that have been selected for in-depth interviews regarding the RLIS Program. (*Refer to discussion of interview length held during set-up call.*) Our interview will take about a half hour—Is this still a good time for you? (*Negotiate new time as needed.*) Thank you so much for your time; we know how busy you must be.

Please be as honest and candid as possible. Any information regarding your successes and challenges will help us understand the overall picture, and we especially appreciate learning about your experiences—both positive and negative. In our reporting, we will not associate responses or findings with individual names or the names of the districts or states.

We have two interviewers on the line, one asking the questions and the other taking notes, who may ask questions as well. We would like to make a recording of the conversation as a back-up to our note taking; this recording would be erased as soon as we have verified that our notes are complete. Do we have your permission to record our conversation?

There will be time for you to ask questions about the study at the end of the interview, but if you need anything clarified during our discussion, please let us know. Are you ready to begin?

APPENDIX E: RLIS STATE COORDINATOR SURVEY

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is xxxx-xxxx. The time required to complete this information collection is estimated to average 20 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collection. If you have any comments concerning the accuracy of the time estimate(s) or suggestions for improving this form, please write to: U.S. Department of Education, Washington, D.C. 20202-4651. If you have comments or concerns regarding the status of your individual submission of this form, write directly to: Erica Lee, U.S. Department of Education, Office of Planning, Evaluation and Policy Development (OPEPD), Policy and Program Studies Service, 400 Maryland Avenue, SW, Washington, D.C. 20202.

Responses to this data collection will be used only for statistical purposes. The reports prepared for this study will summarize findings across the sample and will not associate responses with a specific district/state or individual. We will not provide information that identifies you or your district/state to anyone outside the study team, except as required by law.

Your cooperation in completing this survey will help to make the results of this evaluation comprehensive, reliable, and timely.

1) Does your state use funds from the state RLIS allocation for administrative purposes?

No → Go to question 3

Yes → Go to question 2

2) What proportion of the state RLIS allocation was used for administrative purposes during the 2007–2008 school year?

None

Less than 5 percent

5 percent

3) Do all eligible districts in your state receive RLIS funds?

No

Yes

4) What type of protocol must eligible districts in your state follow in order to receive their RLIS allocation?

No formal process or protocol, all districts receive all funds for which they are eligible

An application for RLIS funds that is part of a comprehensive district improvement plan or other district application for funds

A separate RLIS-specific application form or process

Other (please specify)

If you selected other, please specify: _____

**5) How do you inform districts that they are eligible to receive RLIS funds?
(Mark all that apply)**

- Email
- Posting on Web site
- Letter
- Phone call
- Announcement at state conference or workshop
- Other (please specify)

If you selected other, please specify: _____

6) In addition to the primary goal of making Adequate Yearly Progress (AYP), to what extent are the following a focus for the use of RLIS funds in your state?

	Not a focus	Minimal focus	Moderate focus	Major focus
a. Increasing student achievement in a particular subject area				
b. Reducing the high school dropout rate				
c. Improving the quality of instruction				
d. Improving the ability of English language learners to achieve proficiency in English and reach high academic standards				
e. Ensuring that all students will be educated in learning environments that are safe, drug free, and conducive to learning				
f. Addressing issues specific to rural location, e.g., retaining teachers, providing distance learning opportunities, etc.				

7) In addition to the primary goal of making AYP and those listed above, are RLIS funds used to meet any other goals?

- No → Go to question 9
- Yes → Go to question 8

8) Please list the additional goals. _____

9) To what extent are the following activities a focus for the use of RLIS funds in your state?

	Not a focus	Minimal focus	Moderate focus	Major focus
a. Teacher recruitment and retention, including the use of signing bonuses and other financial incentives				
b. Teacher professional development				
c. Educational technology, including software and hardware				
d. Parental involvement activities				
e. Activities authorized under the Safe and Drug-Free Schools Program				
f. Activities authorized under Title I, Part A				
g. Language instruction for ELL/LEP students				

10) Are there any other activities that are a focus for the use of RLIS funds in your state?

No → Go to question 12
 Yes → Go to question 11

11) Please list other activities that are a focus for the use of RLIS funds in your state.

12) To what extent do you feel your state has made progress toward your RLIS goals and objectives, including the goal of making Adequate Yearly Progress?

No progress → Go to question 16
 Minimal progress → Go to question 13
 Moderate progress → Go to question 13
 Goals and objectives have been accomplished → Go to question 13

13) To what extent has the RLIS funding contributed to your state's progress towards its RLIS goals and objectives?

	No contribution	Minimal contribution	Moderate contribution	Major contribution
a. Making Adequate Yearly Progress				
b. Increasing student achievement in a particular subject area				
c. Reducing the high school dropout rate				
d. Improving the quality of instruction				
e. Improving the ability of English language learners to achieve proficiency in English and reach high academic standards				
f. Ensuring that all students will be educated in learning environments that are safe, drug free, and conducive to learning				
g. Addressing issues specific to rural location, e.g., retaining teachers, providing distance learning opportunities, etc.				

14) Has RLIS funding contributed to your state's progress toward any other goals and objectives?

No → Go to question 16
 Yes → Go to question 15

15) Please list the other RLIS goals and objectives. _____

16) Do you communicate with the districts in your state specifically about the RLIS Program?

No → Go to question 19
 Yes → Go to question 17

17) On what topics do you communicate? (Mark all that apply)

- Eligibility for RLIS funds
- RLIS application process
- Allowable costs
- Assistance in developing RLIS activities
- Other (please specify)

If you selected other, please specify: _____

18) On average, how often do you communicate with each district in your state about the RLIS Program?

- Rarely (1–2 times per year)
- Occasionally (Monthly or every other month)
- Frequently (More than once a month)

19) Do you provide technical assistance or guidance to districts receiving RLIS funds?

- No → Go to question 21
- Yes → Go to question 20

20) What types of technical assistance or guidance do you provide to districts receiving RLIS funds? (Mark all that apply)

- Handbook or guidelines in handbook on appropriate use of RLIS funds
- Conference or workshop presentations on RLIS program
- Information provided on RLIS program on state Web site
- Checklist on appropriate use of funds
- Workshops or conference sessions devoted to receipt of RLIS funds
- District budget review of RLIS fund appropriations
- Other (please specify)

If you selected other, please specify: _____

21) How do you monitor districts' use of RLIS funds? (Mark all that apply)

- Budget review
- On-site monitoring or audits
- Progress reports
- Required self-assessments or self-evaluations by districts
- Monitoring of RLIS is incorporated into general monitoring of funds for districts in need of improvement
- Other (please specify)

If you selected other, please specify: _____

22) What happens when an RLIS-funded district does not make progress towards its goals?

- On-site monitoring or audits
- Technical Assistance for using RLIS funds to address specific problems
- Special monitoring or supervision of RLIS expenditures
- Other (please specify)

If you selected other, please specify: _____

23) Have you ever evaluated your RLIS Program?

- No → Go to question 27
- Yes → Go to question 24

24) Did you produce a report or document based on the evaluation?

- No → Go to question 27
- Yes → Go to question 25

25) Is the report available on the Web?

- No [NOTE: BPA will follow up with you to get a hard-copy] → Go to question 27
- Yes → Go to question 26

26) Please list the URL where the report can accessed.

27) Do you have any suggestions for improvement of the RLIS program?

- No → Go to question 29
- Yes → Go to question 28

28) What suggestions do you have for improvement of the RLIS program? _____

29) Is there anything else you think we should know about your state's RLIS program?

- No → End of survey
- Yes → Go to question 30

30) What else should we know about your state's RLIS program? _____

Thank you again for taking our survey and participating in this evaluation!

APPENDIX F: RLIS DISTRICT COORDINATOR SURVEY

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is xxxx-xxxx. The time required to complete this information collection is estimated to average 20 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collection. If you have any comments concerning the accuracy of the time estimate(s) or suggestions for improving this form, please write to: U.S. Department of Education, Washington, D.C. 20202-4651. If you have comments or concerns regarding the status of your individual submission of this form, write directly to: Erica Lee, U.S. Department of Education, Office of Planning, Evaluation and Policy Development (OPEPD), Policy and Program Studies Service, 400 Maryland Avenue, SW, Washington, D.C. 20202.

Responses to this data collection will be used only for statistical purposes. The reports prepared for this study will summarize findings across the sample and will not associate responses with a specific district/state or individual. We will not provide information that identifies you or your district/state to anyone outside the study team, except as required by law.

Your cooperation in completing this survey will help to make the results of this evaluation comprehensive, reliable, and timely.

1) In addition to the primary goal of making Adequate Yearly Progress, to what extent are the following a focus for your district's use of RLIS funds?

	Not a focus	Minimal focus	Moderate focus	Major focus
a. Increasing student achievement in a particular subject area				
b. Reducing the high school dropout rate				
c. Improving the quality of instruction				
d. Improving the ability of English language learners to achieve proficiency in English and reach high academic standards				
e. Ensuring that all students will be educated in learning environments that are safe, drug free, and conducive to learning				
f. Addressing issues specific to rural location, e.g., retaining teachers, providing distance learning opportunities, etc.				

2) In addition to the primary goal of making Adequate Yearly Progress and those listed above, are RLIS funds used to meet any other goals?

- No → Go to question 4
- Yes → Go to question 3

3) Please list any additional goals.

4) To what extent are the following activities a focus for your district's use of RLIS funds?

	Not a focus	Minimal focus	Moderate focus	Major focus
a. Teacher recruitment and retention, including the use of signing bonuses and other financial incentives				
b. Teacher professional development				
c. Educational technology, including software and hardware				
d. Parental involvement activities				
e. Activities authorized under the Safe and Drug-Free Schools Program				
f. Activities authorized under Title I, Part A				
g. Language instruction for ELL/LEP students				

5) Are there any other activities that are a focus for your district's use of RLIS funds?

No → Go to question 7
 Yes → Go to question 6

6) Please list any other activities that are a focus for your district's use of RLIS funds.

7) To what extent do you feel your district has made progress toward its RLIS goals and objectives, including the goal of making Adequate Yearly Progress?

No progress → Go to question 11
 Minimal progress → Go to question 8
 Moderate progress → Go to question 8
 Goals and objectives have been accomplished → Go to question 8

8) To what extent has the RLIS funding contributed to your district's progress towards its RLIS goals and objectives?

	No contribution	Minimal contribution	Moderate contribution	Major contribution
a. Making Adequate Yearly Progress				
b. Increasing student achievement in a particular subject area				
c. Reducing the high school dropout rate				
d. Improving the quality of instruction				
e. Improving the ability of English language learners to achieve proficiency in English and reach high academic standards				
f. Ensuring that all students will be educated in learning environments that are safe, drug free, and conducive to learning				
g. Addressing issues specific to rural location, e.g., retaining teachers, providing distance learning opportunities, etc.				

9) Has RLIS funding contributed to your district's progress towards any other goals and objectives?

No → Go to question 11

Yes → Go to question 10

10) Please list the other RLIS goals and objectives. _____

11) Do you communicate with your State Education Agency specifically about the RLIS Program?

No → Go to question 14

Yes → Go to question 12

12) On what topics do you communicate? (Mark all that apply)

- Eligibility for RLIS funds
- RLIS application process
- Allowable costs
- Planning/developing RLIS-funded activities
- Other (please specify)

If you selected other, please specify: _____

13) How often do you communicate with your State Education Agency about the RLIS Program?

- Rarely (1-2 times per year)
- Occasionally (Monthly or every other month)
- Frequently (More than once a month)

14) To what extent have you received technical assistance or guidance from your State Education Agency for the RLIS Program?

- Not at all → Go to question 20
- To a minimal extent → Go to question 15
- To a moderate extent → Go to question 15
- To a great extent → Go to question 15

15) How did you use the information and/or technical assistance provided by your State Education Agency? (Mark all that apply)

- To complete our application or comprehensive plan for funds
- To learn about/check on appropriate use of funds
- To identify areas needing attention
- To come up with new ideas for spending RLIS funds
- Other (please specify)

If you selected other, please specify: _____

16) How helpful have you found the following forms of state technical assistance?

	Did not receive	Received, but not helpful	Minimally helpful	Moderately helpful	Very helpful
a. Handbook or guidelines in handbook on appropriate use of RLIS funds					
b. Conference or workshop presentations on RLIS program					
c. Information provided on RLIS program on state Web site					
d. Checklist on appropriate use of funds					
e. Workshops or conference sessions devoted to receipt of RLIS funds					
f. District budget review of RLIS fund appropriations					

17) Are there any other forms of state technical assistance that you have found to be helpful?

No → Go to question 19
 Yes → Go to question 18

18) Please list the other forms of state technical assistance that you have found to be helpful. _____

19) Do you have any suggestions for other types of technical assistance or guidance that would be useful for you in your RLIS Program?

No → Go to question 21
 Yes → Go to question 20

20) What kinds of technical assistance or guidance would you like to receive from your State Education Agency for the RLIS Program? Please explain. _____

21) Do you have any suggestions for improvement of the RLIS Program?

No → Go to question 23
 Yes → Go to question 22

22) What suggestions do you have for improvement of the RLIS program? Please explain.

23) Is there anything else you think we should know about your district's RLIS program?

No → End of survey

Yes → Go to question 24

24) What else should we know about your district's RLIS program? Please explain.

Thank you for taking our survey and participating in this evaluation!



The Department of Education's mission is to promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access.

www.ed.gov