

Independent Evaluation of Colorado READ Act: Per-Pupil Funding



Joseph McCrary, Katie Grogan, Sara Allender, Amanda Nabors, and Rachel Tripathy, WestED and Dale DeCesare and Robert Reichardt, APA

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Colorado READ Act EVALUATION



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Executive Summary

The Colorado State Legislature passed the Reading to Ensure Academic Development (READ) Act in 2012 and updated the Act in 2019. The revised Act requires an independent evaluation to identify and assess strategies that the state, local districts, and schools have taken to support Colorado students in achieving proficiency in reading.

In this report, we describe the lessons learned from the first year of the per pupil evaluation, which included a statewide inventory and virtual site visits conducted with 28 schools and districts between October 2020 and January 2021 along with analysis of achievement and financial data held by CDE

According to schools receiving READ Act funds, the READ Act:

- **Increased the amount of time allocated towards reading instruction;**
- **Led to the use of a data-informed, tiered approach to K-3 literacy instruction; and**
- **Developed a common language to support consistent application of instructional practice across classrooms, schools, and districts.**

Despite these changes, students identified with significant reading deficiencies achieve proficiency by 3rd grade at rates well below their peers who have never been identified with an SRD.



In 2019, the Colorado General Assembly passed and signed into law SB 19-199, which included a provision mandating that an independent, external evaluation of the Colorado's Reading to Ensure Academic Development (READ) Act (see 2020 Annual Report on the Colorado READ Act for an overview of updates in SB 19-199).¹

This is the first-year report of the evaluation of the READ Act. In this report, we describe the lessons learned from the first year of the per pupil evaluation, which included a statewide inventory and virtual site visits conducted with 28 schools and districts between October 2020 and January 2021 along with analyses of achievement and budgetary data help by the Colorado Department of Education (CDE). Remote site visits included in-depth interviews with school and district leaders to gather insight into their use of READ Act funds and to identify successes, challenges, and lessons learned. Described within this report are the historical efforts to implement the provisions of the READ Act and an initial examination of achievement trends of students identified with significant reading deficiencies (SRDs). This initial evaluation report is intended to provide a baseline for future efforts related to the evaluation and is not intended to provide specific findings about the efficacy of a particular READ Act activity or program.

Given the demands the evaluation placed on participating schools and districts during the 2020-21 school year and the COVID-19 pandemic, we express our deep gratitude for their participation.

Summary of Findings

Overall, site visit participants positively viewed the READ Act. Specifically, they noted:

- The law had a positive impact on the amount of time allocated towards reading instruction;

¹ <https://www.cde.state.co.us/cdedepcom/readactreport>



- The READ Act positively influenced a movement towards broader use of a data-informed, tiered approach to K-3 literacy instruction;
- They valued CDE's review of the research bases of curriculum, professional development programs, interventions, and assessments and report that these reviews inform their selections in their schools and districts;
- The READ Act and its implementation has allowed the development of a common language and terminology to support consistent application of instructional practice across classrooms, schools, and districts; and,
- ELG grants were transformational in changing how schools approached K-3 literacy instruction by focusing on the complimentary, layered nature of the four areas where schools typically deploy their ELG funds (external literacy consultants, internal literacy experts, teacher training, and updated literacy materials).

There were a number of challenges identified when trying to implement READ Act provisions.

- Per-pupil funding is universally appreciated by site visit participants. However, the level of per-pupil funding each year is typically only a very small fraction of school and district budgets. This level of funding is viewed as insufficient on its own to cover the costs needed to transform reading programs through purchase of new materials, increased staffing, or increased training. Instead, per-pupil funds are most often mixed in with other funding streams as an additional support to school and district K-3 literacy priorities.
- School and district leaders identified challenges hiring teachers with adequate training in the five core elements of literacy instruction. Combining this with the challenge associated with the numerous instruction, assessment, intervention, and professional



development programs in place results in substantial efforts being expended to recruit and train new teachers. Teacher turnover in such a system is costly to school and districts.

- Schools and districts with large numbers of English Learners (EL) reported concerns about improperly identifying EL students as having an SRD.

In our analyses of student outcome data, we found that students identified with an SRD are not moving off of that status as rapidly as new students are being identified with an SRD. That is, more students were newly diagnosed with an SRD each year than moved off of an SRD designation. On average, four to five percent of K-3 students were newly diagnosed with an SRD each year, while two to three percent of K-3 students moved off of an SRD designation. Students who have been identified as having an SRD achieve third grade reading proficiency at rates far below their peers who have never been diagnosed with an SRD. Furthermore, less than five percent of students who have been diagnosed with an SRD achieved English Language Arts proficiency on the 2019-20 CMAS in third grade, while about half of their non-SRD peers did.

Recommendations

At this point in the evaluation, it would be preliminary to make any sweeping policy recommendations. However, based on the information we collected during the virtual site visits and interviews with school and district leaders, CDE and the State Board of Education may want to consider the following.

1. Examine processes to consider extending the approval of materials or otherwise supporting schools and districts who are using instructional materials that had been approved but are no longer approved in subsequent reviews. School and district leaders indicated that adoption and integration of instructional programs is expensive and time-



consuming. Of the 28 virtual site visits, about four or five indicated that they adopted material approved in the prior round of reviews, only to have those materials no longer approved on the subsequent review.

2. Consider examining policy and program alignment across CDE divisions that impact K-3 education. For example, during the virtual site visits, participants identified challenges coordinating across multiple plans that students may have, such as READ Act plans, Individualized Education Plans (IEPs), and English Language Development Plans. The READ Act Plan Working Group Report² also recommended alignment for READ Act Plans with other individualized plans. Offices such as Educator Preparation, Educator Effectiveness, Principal Resources, District and School Support, and the Preschool through 3rd Grade Office also establish policies and provide programs and supports that impact grade K-3 literacy. Colorado also has other related literacy initiatives, such as the Comprehensive State Literacy Grant, that will impact READ Act implementation and outcomes. We recommend an examination of the alignment throughout CDE and creation of a logic model that illustrates how they should all work together. This will provide context for the evaluation to understand the environment in which schools operate. The information will also provide important information for CDE to coordinate policies and programs that impact grade K-3 literacy.

The evaluation also identified several areas where more information is needed.

1. CDE is required to establish measures for growth to standard for K-3 reading. Furthermore, it is difficult to determine if decisions about SRD designation are valid and reliable since each assessment varies in the concepts they measure and how they measure them. Given the large

² <https://www.cde.state.co.us/coloradoliteracy/readplanworkinggrouplegislativereport>.



- number of K-3 reading assessments in use by schools and districts, we suggest convening a panel of psychometricians to develop recommendations for measuring growth to standard and determining the effectiveness of the assessment system for READ Act purposes.
2. Site visit participants expressed concern about the misidentification of English learners (EL) as also having SRD along with the questions about successful strategies for addressing the reading needs of EL students. We recommend these be significant focal areas for the Year 2 evaluation by identifying schools and districts who are effective improving reading among EL students and exploring the practices they employ.
 3. Throughout the site visits, school and district leaders described human resource challenges, including recruiting, training, and retaining teachers who are effective with students who struggle with reading, and human resource solutions, such as instructional coaches, novel professional development approaches, and retention strategies. We recommend the evaluation focus on these human capital challenges and solutions by conducting a statewide teacher survey collecting data about their experiences.



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Introduction

In this report, we describe the lessons learned from the first year of the per pupil evaluation, which included a statewide inventory and virtual site visits conducted with 28 schools and districts between October 2020 and January 2021.

The Year 1 report is focused on providing baseline information in an effort to learn about prior implementation and not to draw any conclusions about the efficacy of a particular READ Act activity or program.

Two broad research questions guide the evaluation:

- **To what extent were LEPs receiving per pupil funds pursuant to the READ Act, and were schools that were receiving Early Literacy Grant funds successful in reducing the number of students with significant reading deficiencies?**
- **What are the most effective processes, procedures, methods, and strategies that LEPs receiving per pupil funds and schools receiving ELG funds use to achieve significant growth to standard?**



The Colorado Reading to Ensure Academic Development (READ) Act

The importance of achieving early grade reading proficiency for later student academic success is well documented. Achievement of reading proficiency by the end of the third grade is considered by researchers and education leaders to be crucial to a child's future academic success and financial independence.³ To help schools and districts support all children in achieving this goal, the Colorado State Legislature passed the Colorado Reading to Ensure Academic Development Act (READ Act) in 2012 to replace the Colorado Basic Literacy Act (CBLA).⁴ The READ Act provides school districts with funding and support to aid literacy development for kindergarteners through third-grade students, especially those identified with “significant reading deficiencies” (SRDs) who are at risk of not reading at grade level by the end of third grade.

Under provisions of the READ Act, schools test students using reading assessments approved by the Colorado State Board of Education. Those designated as having an SRD are then provided with individual READ plans that identify a pathway for reaching grade-level proficiency. The READ Act specifies certain components required in all student READ plans; however, each plan must be tailored to meet individual student needs.

In addition to specifying that the Colorado State Board of Education approve a set of reading assessments, the READ Act also charges the Colorado Department of Education (CDE) with creating advisory lists of instructional

³ Hernandez, D. J. (2011). Double jeopardy: How third-grade reading skills and poverty influence high school graduation. The Annie E. Casey Foundation; Fiester, L. (2013). Early warning confirmed: A research update on third-grade reading. The Annie E. Casey Foundation. <https://www.aecf.org/resources/double-jeopardy/>

⁴ The READ Act includes many of the same elements as the CBLA, including a focus on K-3 literacy, assessment, and individual plans for students reading below grade level with the addition of: (1) funding to support these efforts, (2) requirements for parent communication, and (3) an explicit focus on students identified as having a significant reading deficiency.



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programming⁵ and professional development programs⁶ that are scientifically based and evidence-based (see Appendix 1 for a discussion of the foundation of scientifically based reading). LEPs may use READ Act funds to purchase instructional programming from the advisory list. (LEPs may also purchase instructional programs that are not on CDE’s advisory list if they do not use READ Act funds.) With the 2019 revision of the READ Act, the legislation requires all K-3 teachers to complete 45 hours of evidence-based training in teaching reading. Due to the COVID-19 pandemic, the deadline for meeting this requirement was extended until January 31, 2022. The professional development programs on CDE’s advisory list allow teachers who successfully complete the professional development to meet this requirement. CDE has also created an array of resources for districts and schools to help administer the READ Act; see Appendix 2 for a list and links to those resources.

The Comprehensive Early Literacy Grant Program was also created in 2012 as part of the Colorado READ Act. This fund was created primarily to provide resources through Early Literacy Grants (ELGs) for Colorado schools and districts to implement interventions, programs, and supports specifically for K-3 students with SRDs. Each year, approximately \$38 million is appropriated to the fund, with nearly \$33 million distributed directly to school districts. Schools may apply individually or as part of a consortium of schools. To help ensure that these funds are appropriately targeted, the state has, since 2012, provided districts with a list of approved, evidence-based education interventions that are supported by the grant. Districts, in turn, are required by statute each year to provide information to the Colorado Department of Education regarding their planned usage of funds to support students with SRDs. In 2018, House Bill 18-1393 allowed for the creation of two grant programs in addition to the original comprehensive ELG program. Sustainability Grants allow districts and schools

⁵ <https://www.cde.state.co.us/coloradoliteracy/advisorylistofinstructionalprogramming2020>

⁶ <https://www.cde.state.co.us/coloradoliteracy/readactprofessionaldevelopmentevidenceteachertraining>



who completed ELG Comprehensive Grants to receive additional funding to continue their activities. Annual Professional Development grants provide funding to districts and schools to support the implementation of evidence-based reading programming and strategies.

Evaluation of the READ Act

In 2019, the Colorado General Assembly passed and signed into law SB 19-199, which included a provision mandating that an independent, external multiyear evaluation of the READ Act program be conducted (see 2020 Annual Report on the Colorado READ Act for an overview of updates in SB 19-199).⁷ The evaluation is now under way and is being conducted by an independent research team led by WestEd that includes APA Consulting and RTI International.

The key legislative goals for this evaluation are as follows:

1. Help state policymakers and district leaders understand the impacts of READ Act funding and support on students, families, schools, and districts
2. Learn and share successes and best practices across districts and schools
3. Inform improvements to the READ Act by understanding how funds were used
4. Get direct feedback from school and district leaders about how the Colorado Department of Education can best support further improvement in READ Act implementation

An additional goal that has been added to this work is to understand how the current COVID-19 pandemic has impacted district- and school-level strategies for delivering K-3 reading programs, and how READ Act funding and

⁷ <https://www.cde.state.co.us/cdedepcom/readactreport>



the Colorado Department of Education can best support districts and schools delivering such reading programs during the pandemic.

This report summarizes findings and data gathered during the first year of the evaluation. The report relies on numerous sources of information, including

1. Reviews of existing data that school districts submit each year to the Colorado Department of Education,
2. Data from an inventory sent to all districts and ELG-funded schools by the evaluation team to gather information on their READ Act-funded activities and investments since the beginning of the availability of READ Act funding, and
3. Data gathered through an initial round of virtual site visits that the evaluation conducted with 28 schools and districts throughout the state during the 2020/21 school year.

These site visits included in-depth interviews with school and district leaders to gather insight into their use of READ Act funds and to identify successes, challenges, and lessons learned. In future years, this evaluation will produce additional summary reports to present cumulative findings from data-gathering activities, including data gathered through additional site visits to schools and districts across Colorado.

Research Questions

Two broad research questions guide this report:

1. To what extent were LEPs receiving per pupil funds pursuant to the READ Act, and were schools that were receiving Early Literacy Grant (ELG) funds successful in reducing the number of students with significant reading deficiencies?
2. What are the most effective processes, procedures, methods, and strategies that LEPs receiving per pupil funds and schools receiving ELG funds use to achieve significant growth to standard?



In this report, for the first year, the evaluation focused on gathering descriptive information about the instructional programs, interventions, professional developments, and assessments in use; spending of READ Act funds; and the identification of students with a significant reading deficiency (SRD). The mandate for the first year of the evaluation includes providing this information for the history of the READ Act. Below we describe the data sources we relied on and discuss their limitations.

Purpose and Organization of this Report

In this report, we describe the lessons learned from the first year of the per pupil evaluation, which included a statewide inventory and virtual site visits conducted with 28 schools and districts between October 2020 and January 2021. The summary report allows us to expand upon extant data and learn about the implementation of READ Act funding across a range of schools and districts. **The Year 1 report is focused on providing baseline information in an effort to learn about prior implementation and not intended to be used to draw any conclusions about the efficacy of a particular READ Act activity or program.**

It is also important to note several limitations regarding this year's reports. First, due to the COVID-19 pandemic, we were forced to conduct abbreviated, virtual site visits instead of the multi-day, in-person visits that were planned. This limited what we were able to cover during the interviews and eliminated our ability to observe implementation of READ Act–related instructional activities. In addition, the information gathered during the virtual interviews is based on retrospective data that is more prone to recall or misclassification bias. Staff turnover also affected the quality of retrospective data collected because current staff members who participated in interviews may not have first-hand knowledge of READ Act implementation from previous years. Lastly, the extant data from CDE was not collected for the purpose of an evaluation. Reporting requirements



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also changed from year to year, so making any broad conclusions between years is not always possible.⁸

Key data and information presented in this Year 1 summary report include: (a) a retrospective look at pre-pandemic, READ Act–funded activities undertaken by districts and schools, including information on the types of literacy assessments, student assessments, and reading intervention programs used; (b) preliminary insights from the evaluation’s first round of site visits, including programs and practices perceived as being effective in improving student outcomes; (c) a summary analysis of how schools and districts across the state responded to the pandemic, with a focus on READ Act–related activities during spring and fall 2020; and (d) observations, initial findings, and recommendations for next steps from the external evaluation team. See Appendix 3 for a discussion of data sources and Appendix 4 for the process used to select schools and districts for site visits.

⁸ Variable-specific limitations are discussed in the methods section.



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Overall Approaches to Reading

Site visit interviews included a discussion of each school's overall approach to grades K-3 reading instruction. Questions were designed to gather data on the amount of time students in grades K-3 receive literacy instruction, how such instruction might be divided between whole class and smaller group instruction, how struggling readers are typically supported, if there is variation in how English Learner (EL) students are supported, and how reading curricula and materials are selected for use in the school's literacy program.

Educators whose tenure predates the READ Act indicate that it led to a significant increase in the amount of classroom time spent on reading.

The READ Act also led to an increase in data-informed, tiered approaches to reading instruction and interventions.

Site visit participants indicated that they appreciated the lists of approved materials but also indicated that changing instructional programs when a program is no longer approved is an expensive and onerous task.



Remote visit schools commonly use a three-tiered approach to their K-3 literacy programs. These tiers reflect use of a multi-tiered system of support (MTSS) framework to organize instruction⁹. In general, all students receive at least one 90-minute block of time each day dedicated to core literacy instruction. **The 90-minute core literacy block is generally referred to as “Tier 1” of the K-3**

literacy program, and it typically includes time for reading instruction and time for students to work on their writing skills. This writing instruction is viewed as an important component in supporting development of strong reading skills. The Tier 1 literacy block also typically includes both whole group (the entire class together) instruction and time for students to be placed into smaller groups organized by their reading level as determined using a variety of literacy assessments. Small group instruction time is considered important by school leaders because it allows educators to provide more tailored instruction that is aligned with the reading levels in each group and enables instruction to be more differentiated depending on student needs.

Remote site visits included a discussion of each school’s overall approach to grades K-3 reading instruction. Questions were designed to gather data on the amount of time students in grades K-3 receive literacy instruction, how such instruction might be divided between whole class and smaller group instruction, how struggling readers are typically supported, if there is variation in how English Learner (EL) students are supported, and how reading curricula and materials are selected for use in the school’s literacy program. The READ Act evaluation inventory included a series of items that asked schools or districts to report which core, supplemental, and intervention programs they used for each grade (K-3) for the past four school years (2017-18 to 2020-21).

⁹ More information about MTSS can be found at the CDE website: <http://www.cde.state.co.us/MTSS>



The support structure used during Tier 1 small group instructional time varies somewhat across case study sites. One approach is to place students into smaller groups with others at a similar reading level within their same classroom. Another approach is to group students across classrooms, or even across grade levels. A third approach is termed a “flooding strategy” designed to bring a variety of adults (including reading coaches, additional teachers, paraprofessionals, and sometimes parents) into the classroom during small group instruction time. These adults are brought in to ensure that as many small groups of students as possible are directly supported by an adult. Schools that do not use a flooding approach, or do not have access to sufficient additional staffing or adults to implement such a strategy, tend to focus small group instruction on their most struggling readers, or have teachers rotate through small groups of students, while small groups self-engage in assignments.

Tier 2 is used to provide additional support to struggling readers usually outside of the 90-minute, core literacy block. Most often this Tier 2 support includes approximately 30 minutes per day of added instruction. To ensure that Tier 2 support does not come at the expense of time in the Tier 1 reading block, case study schools use a mix of strategies, including using a reading interventionist or other staff member to pull students out of science, social studies, or other classes to deliver the Tier 2 support. Some schools have also developed after-school reading tutoring programs to support the needs of struggling readers.

Tier 3 is typically associated with provision of added resources and staffing to support students in special education who have received an Individual Education Plan (IEP). This Tier 3 support is provided by special education staff specialists focused on the specific learning goals outlined in each student’s IEP.

There is **significant variation in how virtual site visit schools address the needs of EL students.** One of the approaches schools with larger percentages of EL students use is a dual language approach where K-3



Overall Approaches to Reading

instruction is provided through either an English or Spanish track for students. Another approach among schools is to use a “co-teaching” model where EL-certified teachers in the district co-plan lessons with classroom teachers and support classroom instruction. For schools with smaller EL populations, EL students tend to participate in the Tier 1 literacy block with their English-speaking peers. In some cases, an EL aide is present during at least part of this Tier 1 time to help support EL students, in other cases the primary EL support is delivered through an EL specialist during Tier 2 pull out time.

With regard to the process used to select a core K-3 literacy curriculum and associated materials, leaders tend to review guidance provided by CDE and utilize a collaborative internal process to make final selection decisions. This decision may be made at a district level for the core curriculum or the decision may be made at the school level. Decisions about selecting supplemental or literacy intervention materials could occur at the school or district level. Often, a mix of teachers, coaches, and interventionists are used to review literacy curricular and assessment options and provide feedback on quality and fit based on the specific needs of the student population served. Schools typically attempt to work within the framework of CDE’s list of reviewed and approved literacy materials. Schools that receive Early Literacy Grant (ELG) funding sometimes include a grant-funded external literacy consultant in the process of reviewing and selecting appropriate curricula, assessments, and literacy materials. Recommendations on materials from trusted colleagues and successful prior experience with materials were important factors to school and district leaders in materials selection.

According to the LEP inventory, there were 40 different core instructional programs in use during the 2020-21 school year. Amplify CORE Knowledge, which was approved by CDE, was the most commonly used core instructional program (Exhibit 1). Twenty-three districts reported using Amplify CORE Knowledge in Kindergarten and 24 districts reported using the program in grades 1-3. Other CDE approved programs reported in use by at least 5 districts include



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McGraw Hill: Wonders 2017 (13-15 districts across each grade) and 2020 (12-15 districts across each grade), Pearson Reading Street (12-13 districts across each grade), EL Education: K-5 Language Arts Curriculum (11-12 districts across each grade), Houghton Mifflin: Into Reading (10-12 districts across each grade), Orton-Gillingham International: Yoshimoto Orton Gillingham (9-12 districts across each grade), Houghton Mifflin: Journeys Common Core 2014 (9-10 districts across each grade) and Houghton Mifflin: Journeys 2016 (8-9 districts across each grade).

Exhibit 1. Number of School Districts Adopting Core Instructional Programs in 2020-2021 School Year

Core Program	2020-21				
	Kindergarten	First	Second	Third	Sum
Amplify: Core Knowledge (CKLA)	23	24	24	24	95
McGraw Hill: Wonders 2017	14	13	13	15	55
McGraw Hill: Wonders 2020	13	12	14	15	54
Pearson: Reading Street	13	13	12	12	50
EL Education : K-5 Language Arts Curriculum	12	12	11	12	47
Houghton Mifflin: Into Reading	10	11	12	12	45
Orton Gillingham International: Yoshimoto Orton Gillingham	9	12	9	10	40
Houghton Mifflin: Journeys Common Core 2014	10	9	10	10	39
Houghton Mifflin: Journeys 2016	8	9	9	9	35

Note. Table is limited to core instructional programs used by more than 5 districts during the 2020-21 school year.

Source: School District responses on LEP inventory.

Districts reported using 55 different supplemental programs during the 2020-21 school year. Lexia Core-5, Amplify: mClass Amplify Reading edition, and Orton Gillingham International: Yoshimoto Orton Gillingham were the most popular supplemental program used by more than 25 districts during the 2020-21 school year (Exhibit 2).



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Exhibit 2. Number of Districts Using Supplemental Instructional Programs in the 2020-2021 School Year

Supplemental Program	2020 21			
	Kindergarten	First	Second	Third
Lexia: Core 5	32	32	30	32
Amplify: mClass Amplify Reading Edition	28	31	30	31
Orton Gillingham International: Yoshimoto Orton Gillingham	29	33	27	27
Learning A-Z: Raz-Plus	21	22	18	19
Literacy Resources: Heggerty Phonemic Awareness	6	28	26	19
Curriculum Associates: i-Ready	13	15	16	15
Istation: Istation Reading	11	13	12	12
Wilson: Foundations	14	13	11	9
Moby Max: Moby Max	9	11	15	11
Literacy Resources: Heggerty Phonemic Awareness Spanish	27	4	5	4
Really Great Reading: Blast	8	15	11	6
Gander Publishing: Seeing Stars	7	8	9	9
Gander Publishing: Visualizing and Verbalizing	7	6	9	9
Really Great Reading: HD Word	4	4	11	10
Write: Write now-Right Now	7	7	7	7
Really Great Reading: Countdown	11	6	5	3
EL Education : K-5 Language Arts Curriculum	6	5	4	6

Note. Table is limited to supplemental instructional programs used by more than 5 districts during the 2020-21 school year.

Source: LEP responses on the LEP Inventory.

Lastly, according to the LEP inventory, 77 intervention programs were in use during the 2020-2021 school year. The most popular intervention programs, in use in over 20 districts, include Lexia: Core 5, Amplify Burst, SIPPS, READ Naturally, Orton Gillingham International: Yoshimoto Orton Gillingham, and Amplify: mCLASS Intervention (Exhibit 3).



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Exhibit 3. Number of Districts Using Intervention Instructional Programs in Use in the 2020-2021 School Year

Intervention Name	2020 21			
	Kindergarten	First	Second	Third
Lexia: Core 5	28	32	32	34
Amplify: Burst	22	23	23	21
SIPPS: SIPPS	19	21	22	24
Read Naturally: Read Naturally	14	21	25	23
Orton Gillingham International: Yoshimoto Orton Gillingham	23	21	19	17
Amplify: mCLASS Intervention	22	24	25	24
Collaborative Classroom: SIPPS	18	15	19	17
Linda Mood Bell: Seeing Stars	14	15	16	15
Orton Gillingham International: Orton Gillingham International	11	14	16	17
95% Group: Phonics	15	15	15	12
Curriculum Associates: iReady	14	15	13	14
Linda Mood Bell: Phoneme Sequence(LIPS)	14	14	13	12
Wilson: Wilson Reading Systems	11	12	15	15
Istation Reading: English	13	13	14	12
95% Group: Phonological	14	14	12	9
Linda Mood Bell: Visualizing and Verbalizing	9	13	13	13
Really Great Reading: Blast Foundations	8	11	10	6
McGraw Hill: Wonder Works	8	8	7	9
Moby Max: Moby Max	10	8	5	9
Really Great Reading: HD Word	4	5	11	12

Note. Table is limited to intervention instructional programs used by more than 10 districts during the 2020-21 school year.

Source: LEP responses on the LEP Inventory

Challenges, Opportunities, and Lessons Learned

Virtual site visit participants whose tenure at their school or district predated passage of the Read Act report the law had a positive impact on the amount of time allocated towards reading instruction and placed a renewed emphasis on K-3 literacy instruction in general. Prior to the Read Act, for example, some leaders indicate a total of 60 minutes per day was typically spent on reading instruction, and that passage of the law led to an expansion of core literacy instruction to 90 minutes per day plus an additional 30 minutes of added time to support struggling readers. This means that, in some cases, struggling



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readers receive double the literacy support they would have received prior to passage of the Act. In some cases, schools reported an increase in student reading assessment scores after implementation of their expanded literacy blocks, and expansion of this block is viewed as one of the more impactful aspects of the Read Act. These site visit participants further indicate that educators were initially concerned with how expanded time devoted to K-3 literacy instruction might negatively impact time spent on other academic subjects. **Flexibility, training, and creativity were needed to help educators incorporate existing science and social studies lessons into reading time to accommodate the expanded literacy block, according to these leaders.**

Virtual site visit participants, teachers, and reading specialists also report that passage of the READ Act positively influenced a movement towards broader use of a data-informed, tiered approach to K-3 student literacy instruction. This included expanding educators' use of data to diagnose the needs of students to be addressed in small groups. Expanded use of data to identify struggling readers also supported successful creation of a separate tier of support specifically for such readers. Some veteran educators reported that the process of using interim assessments to screen students followed by progress monitoring with diagnostic assessments to pinpoint learning needs was a beneficial product of the READ Act.

These leaders and other educators indicate that, prior to the READ Act, it was more common for teachers to use their own judgement or impressions to identify student needs, rather than assessment data, and that the Act helped bring more consistent structure and alignment of data to the process. **This consistent structure led to what is now “common language” used across Colorado among educators with regard to Tier 1, Tier 2, and Tier 3 instruction as well as common terminology such as significant reading deficiencies (SRDs) for struggling readers.** Having such common language and terminology is viewed as useful to support more consistent application of instructional practice across classrooms, schools, and districts.



Overall Approaches to Reading

CDE's work to review the research supporting various literacy curricula and assessments is generally viewed by site visit participants as valuable and is used to inform decisions regarding the purchase of such materials and tools. According to these leaders, such decisions for districts and schools are extremely resource-intensive, because they require not only a major investment to purchase curricula and assessments from external vendors, but also because they require massive investments in staff time to conduct sufficient training so that all educators understand how to properly implement the purchased materials in the classroom.

Because of the major investments required in dollars and staff time, school and district leaders indicate it is extremely challenging and sometimes cost prohibitive to shift away from curricula, assessments, or other materials that were purchased in prior years. For this reason, **some district leaders indicate more clarity is needed in CDE's process for reviewing and approving materials.** Such increased clarity is particularly critical if materials approved in one version of the list are not included in later lists of approved materials list.

Teachers and leaders in site visit schools indicated several additional lessons learned regarding K-3 literacy instruction, including:

1. **The critical importance of providing adequate training to teachers, paraprofessionals, coaches, tutors, and other personnel used to support K-3 student literacy development.**

In particular, these staff and personnel require training in the five core elements of literacy instruction to ensure: 1) all personnel understand the mechanisms by which children acquire and retain reading skills, and the specific instructional strategies that can help support such skill development; 2) consistent use of terminology across classrooms and grades and across schools so that students have access to consistent literacy instruction regardless of the school or classroom they attend; and 3) K-3 literacy instruction is grounded in research.



- 2. The value and importance of building teacher and interventionist capacity to use assessment results to develop and provide targeted reading interventions for students.** This capacity includes the ability to appropriately administer assessments, the ability to identify reading challenges facing students from the assessment data, the ability to identify appropriate materials to address those challenges, and the ability to effectively use materials to improve student reading skills. This represents a complex set of skills whose cultivation requires a system of support where teachers have access to constructive feedback and coaching from reading experts, and adequate time to reflect on their practice.
- 3. The importance of using both large and small group instruction to support the literacy skill development of all K-3 students.** This mixed structure exposes students to multiple teaching styles and interventions, which educators believe provides multiple pathways to meet student needs.
- 4. In schools that do not rely on a core literacy curriculum for all their K-3 students, teachers use more of an ad hoc approach to instruction, which can lead to inconsistent instruction across classrooms.** Even in cases where a core literacy curriculum is used, school leaders often indicate the need to identify additional materials focused on phonics/phonemic awareness to supplement the primary curriculum.

With regard to the COVID-19 pandemic, school and district leaders uniformly report that online literacy instruction has a disproportionately negative impact on at-risk, immigrant, and homeless students. These students tend to have more issues than other students with internet connectivity problems, lack of quality computer equipment, and distractions at home that make it more difficult



Overall Approaches to Reading

for them to maintain focus on classwork. Key additional lessons learned according to school leaders include:

- **Providing each student with reliable computer equipment** or other hardware to use at home (“1 to 1 technology”) improves online learning engagement.
- Overall, **online instruction is not viewed as an effective environment to teach reading for K-3 students**. The youngest students typically cannot spend 90 minutes per day focused on literacy instruction in front of a computer. Case study school leaders indicated the need to reduce such daily literacy instructional time for this reason.
- **Existing inequities across students have been greatly exacerbated**, and those who have access to more parental support at home – in some cases because such parents have jobs that allow them to work remotely – gain even larger advantages over their peers.
- The **negative effects of the pandemic on EL students** may be particularly pronounced. This is because, in addition to challenges with delivering literacy instruction to K-3 students online, in-person instruction also suffers since it is harder to visually track and practice speaking when students and teachers are wearing masks.



3

Pre-service and In-service Training

Site visits interviews included a discussion of the training opportunities available in each school for K-3 teachers, coaches, instructional leaders, and other staff, and any gaps that exist in either veteran or new teacher literacy instructional knowledge or skills.

Discussions included school leader perceptions of the quality of pre-service training that educators received prior to joining the school, as well as in-service training received from state, district, or school-level sources.

School and district leaders note that all teachers require additional training to ensure:

- **Understanding of the research behind effective K-3 literacy instruction;**
- **Understanding of the mechanisms by which children acquire and retain reading skills;**
- **Consistent use of terminology across classrooms, grades, and schools;**
- **Grounding in the most up-to-date research and best practice; and**
- **Capacity to administer assessments and use data to design well-targeted reading interventions for students.**



Pre-service and In-service Training

Site visit participants consistently indicate the **critical importance of providing adequate training** to teachers, paraprofessionals, coaches, tutors, and other personnel

used to support K-3 student literacy development. Over 70 percent of districts (n=151) responding to the LEP inventory indicated that the ability to teach reading was a primary factor when hiring K-3 teachers. Site visit participants indicate these staff and **personnel often lack adequate training in the five core elements of literacy instruction.** This training is needed to ensure:

Site visits included a discussion of the training opportunities available in each school for K-3 teachers, coaches, instructional leaders, and other staff, and any gaps that exist in either veteran or new teacher literacy instructional knowledge or skills. Discussions included school leader perceptions of the quality of pre-service training that educators received prior to joining the school, as well as in-service training received from state, district, or school-level sources. With regard to state-level training requirements, site visits probed on Colorado's evidence-based literacy training requirements for all K-3 teachers¹ and other state teacher training requirements, such as training pertaining to Culturally and Linguistically Diverse (CLD) Education.¹ Site leaders were also asked to discuss the quality of their job applicant pools, and the degree to which they have access to well-trained, well-prepared teachers to fill open positions. As part of the READ Act evaluation inventory, participants were asked to report on hiring practices as well as the professional development programs used over the past four school years (2017-2018, 2018-2019, 2019-2020, 2020-2021).

1. All personnel understand the research behind effective K-3 literacy instruction, including the five essential elements of reading instruction.
2. All personnel understand the mechanisms by which children acquire and retain reading skills, and the specific instructional strategies that can help support such skill development.



Pre-service and In-service Training

3. Consistent use of terminology across classrooms, grades, and schools so that students have access to consistent literacy instruction regardless of the school they attend.
4. K-3 literacy instruction itself is grounded in the most up-to-date research and best practice.
5. Teachers have the capacity to administer assessments and use data to design well-targeted reading interventions for students.

The importance of providing adequate training on the five essential elements of literacy instruction is further highlighted by the fact that site visit participants consistently indicate new-to-the-profession K-3 teacher hires and even veteran teacher hires are often not adequately trained in the science of reading instruction. Instead, these leaders point to a general **need to build and develop knowledge and instructional expertise in the science of reading instruction throughout Colorado's teacher workforce.**

While site visit participants agree that literacy instruction experience would ideally be a priority in hiring decisions, many also report that there is a lack of qualified teaching candidates in general. Some schools, particularly in rural areas, report consistent challenges finding any certified teaching candidates for open positions. School reported investing in training and use of a highly structured core curriculum that suits the five essential elements of reading instruction as a result. Significant investment in new hires' reading instructional knowledge and skills can then be easily lost due to persistent teacher turnover in many schools.

Generally, site visit participants are supportive of the need for K-3 teachers to complete research-based literacy instruction training. According to the LEP inventory, districts reported using 22 different professional development programs during the 2020-21 school year (See Exhibit 4). Districts were most likely to use Orton Gillingham International and Voyager Sopris Language Essentials for Teachers of Reading and Spelling (LETRS). School and district leaders whose staff have participated in the LETRS training give this program



Pre-service and In-service Training

strong reviews. Other popular programs include Wireless Generation (now known as Amplify), 95% Group, Linda Mood Bell/Gander Publishing Learning Process, Keys to Literacy: Key to Beginning Reading and McGraw Hill.

Exhibit 4. Number of School Districts Using Professional Development Programs, by Year

	2017 18	2018 19	2019 20	2020 21
Orton Gillingham International: Orton Gillingham International	23	28	29	26
Voyager Sporis Learning: LETRS	11	13	21	25
Cambium Education dba Voyager Sopris Learning: LETRS	7	9	16	18
Wireless Generation (now know as Amplify): Wireless Generation (now know as Amplify)	16	16	15	13
95% Group Inc: 95% Group Inc	4	4	6	11
Linda Mood Bell/ Gander Publishing Learning Process: Linda Mood Bell/ Gander Publishing Learning Process	15	13	11	10
Keys to Literacy: Key to Beginning Reading	2	2	1	9

Note. Table is limited to professional development programs used by more than 5 districts during the 2020-21 school year.

Source: LEP Responses on LEP Inventory.

School leaders are concerned, however, about the burden placed on teachers by Colorado’s requirement that all K-3 teachers complete a minimum of 45 hours of literacy instruction training by the end of January 2022. This is the current deadline set by the Colorado State Board of Education. Leaders indicate this requirement takes teachers far longer than 45 hours – sometimes 100 hours per teacher – to complete because of required homework and exercises. While the January 2022 deadline represents a six-month extension over the previous deadline, school leaders point to educator exhaustion and burnout following more than a year of disrupted instruction due to the COVID-19 pandemic and uncertainty over the ability of schools and districts to resume full, normal operations in Fall 2021. Teachers during the pandemic have focused the bulk of their energies to delivering effective online and in-person instruction, which is particularly challenging in grades K-3. In addition, school leaders report that many teachers are simultaneously under pressure to



complete a minimum of 45 hours of Culturally and Linguistically Diverse (CLD) Education training (also required by the State Board of Education), which is a significant additional burden amidst the pandemic.

Challenges, Opportunities, or Lessons Learned

According to many site visit participants, there is significant value in maintaining a school-based, full-time or nearly full-time literacy coach or reading interventionist trained in the science of literacy instruction. This may enable schools to:

- Establish and continually reinforce research-based literacy instruction throughout the school.
- Continually coach and train teachers and new hires to ensure they are consistently and properly implementing reading curricula.
- Collaborate with teachers in utilizing literacy assessment data to diagnose and address student needs.
- Maximize school and district-level investments in collaborative professional development time, such as professional learning communities
- Ensure the longer-term sustainability of progress made through temporary initiatives such as Early Literacy Grants.

Absent dedicated literacy coach staffing within their school, site visit participants indicate that professional development and other teacher training initiatives can rapidly fade due to staff turnover and lack of continuous reinforcement of initial training priorities. Such internal coaching is particularly critical, site visit participants indicate, since use of external consultants are designed to be short-term investments that need to be self-sustaining over time to justify their expense.

Addressing gaps in teacher and leader training and professional development on literacy instruction is a core motivator for schools' pursuit



Pre-service and In-service Training

and implementation of ELG grants. ELG Grants provide schools with resources to pay teachers stipends for time spent on literacy training such as the LETRS program. Non-ELG schools are unable to provide such stipends to teachers and staff. This is viewed as important because, while Colorado has made the LETRS course free, completing the course imposes significant added teacher time commitment. Compensating teachers appropriately for this time is viewed as an important motivator that also signals the high priority which the school, district, and state places on the training.

Site visit schools that have not received ELG funds indicate that they experience an ongoing struggle to find adequate funding to provide comprehensive teacher training, particularly in smaller districts. These schools often indicate that literacy professional development is provided to their K-3 teachers using a patchwork of trainings through CDE, their district, or through a regional Board of Cooperative Education Services (BOCES). Leaders indicate this approach to training does not always lend itself to establishment of a unified approach to K-3 literacy instruction. Larger districts have the economies of scale to develop their own training and materials infrastructure that can support reading instruction. However, even schools in larger districts reported they found significant value in ELG-funded training.

Not surprisingly, input received through site visits indicates **schools that experience high levels of teacher turnover require continual staff training to maintain consistency in delivery of evidence-based, K-3 literacy instruction.** Conversely, schools with low teacher turnover enjoy longer-term benefits to training. For instance, some case study schools that have experienced low staff turnover over time report ongoing positive staff impacts associated with training provided through Reading First grants allocated to schools over a decade ago (2007).¹⁰

¹⁰ For more information on the Reading First Program, see: https://ies.ed.gov/ncee/pubs/20094038/summ_a.asp



4

READ Act and ELG Funding

Site visits in Fall 2020 included 11 Colorado schools that received only per-pupil funding through the READ Act, and 17 that received both per-pupil and ELG funds. Questions were designed to gather data on how each school utilized READ Act funds, the challenges, successes, and impacts associated with using the funds, and any lessons learned by school and district leaders. The two sources of READ Act funding are “pre-pupil funding” — allocated to each school in the state based on the number of students with SRDs—and the Early Literacy Grant.

Schools and districts used READ Act per-pupil funds to:

- **Purchase services, staffing, and other materials, which include reading specialists and interventionists, supplies, and subscriptions;**
- **Purchase instructional and tutoring programs;**
- **Provide professional development;**
- **Operate a summer school;**
- **Purchase technology or software.**



READ Act and ELG Funding

Site visits included a discussion with school and district leaders regarding their use of funds provided through the State of Colorado's READ Act to support K-3 literacy instruction. The two sources of READ Act funding are:

1. **“Per-pupil funding”** that is allocated by the state to every school in Colorado based on their number of enrolled K-3 pupils identified as having a significant reading deficiency (SRD).
2. **Early Literacy Grant (ELG)** funding that is administered by the CDE and distributed to selected districts and schools who choose to go through a grant application process and who are selected for grant awards. ELG grants have been issued to four cohorts of districts and schools, with each cohort occupying a four-year period: i) Cohort 1 from 2013-16; ii) Cohort 2 from 2016-19; iii) Cohort 3 from 2017-20; and iv) Cohort 4 from 2019-22.

Site visits in Fall 2020 included 11 Colorado schools that received only per-pupil funding through the READ Act and 17 that received both per-pupil and ELG funds. Questions were designed to gather data on how each school utilized READ Act funds, the challenges, successes, and impacts associated with using the funds, and any lessons learned by school and district leaders. The inventories included a table of spending categories for each district to indicate how much READ Act funds they had spent in each category. As we examined the spending responses, we identified inconsistencies in the responses that may have indicated multiple interpretations of what was being asked. As a result, we converted the spending figures to binary indicators of whether the district or school spent READ Act funds on that particular use.

The most frequently cited use of READ Act per pupil funds is the purchase of other services, staffing, and other materials (Exhibit 5); these include hiring reading specialists and interventionists and purchasing supplies and subscriptions. Other uses of READ Act per pupil funds include purchasing instructional and tutoring programs, providing professional development, operating a summer school, and technology or software purchases.



READ Act and ELG Funding

Exhibit 5. Number of School Districts Reporting Spending READ Act Funds, by Spending Category and School Year

Spending Category	School Year			
	2017 18	2018 19	2019 20	2020 21
Purchase Any Other Services, Staffing or Materials	62	62	69	60
Purchase Reading Instruction Programs	40	42	47	49
Provide Reading Tutoring Programming	26	30	30	31
Provide Professional Development for Literacy Instruction	25	25	31	33
Operate a Summer School	32	28	21	28
READ Act Funds Retained by District	27	29	30	14
Provide Technology or Software to Assess or Monitor Students	21	25	24	23
Operate a Full-day Kindergarten Program	26	26	3	1
Purchase the Services of a Literacy Specialist from a BOCES	3	2	2	3

Note: One hundred fifty-one school districts accessed the inventory administered for this evaluation.

Prior to the 2019-20 school year, schools and districts used per-pupil funds to help offset the cost of providing full-day kindergarten programs, especially for at-risk students. However, under 2019 legislation signed into Colorado law, the state now provides funding to cover the cost of full-day kindergarten. School and district site visit participants report that, following this change in state policy, **per-pupil READ Act funds are now typically used to help support the cost of providing summer school for struggling readers, to support the staffing costs of providing reading interventionists in schools, and to support the purchase of K-3 literacy curricula and materials.** While these were frequently cited uses of per-pupil funding, it was not unusual for site visit participants to express confusion as to the state’s “allowable uses” of per-pupil funds.



5

Identifying Significant Reading Deficiencies

Site visits included a discussion at each site of the process for identifying students that have Significant Reading Deficiencies (SRDs) as outlined under the READ Act. Questions were designed to gather data on a variety of topics, including the process used to identify SRDs, challenges or successes with this process, additional guidance and support which might be needed, and impacts of the COVID-19 pandemic.

Efforts to identify Significant Reading Deficiencies (SRDs) included:

- interim reading assessments administered to all students
- diagnostic reading assessments to verify whether the student has an SRD, diagnose the likely causes of the SRD, and inform instructional strategies to best support that student
- on-going progress monitoring

Schools emphasized the need to ensure that teachers have the training to properly diagnose the particular literacy challenges each student faces.



Identifying Significant Reading Deficiencies

In general site visit schools used a similar initial approach to screen students for SRDs, which includes using an interim reading assessment (such as DIBELS), typically administered near the beginning of the school year to all K-3 students. Many schools use the vendor-provided color-coded scheme to classify students (with students scoring low in specific literacy areas assigned a “red” or “yellow” color). Whether a school administers a Spanish version of the interim assessment tends to be associated with the size of the school’s EL student population. If the EL population is only a small percentage of overall enrollment, then the same assessment is used for all students. In schools with larger EL enrollments, the Spanish language version of the interim assessment is used.

According to responses to the LEP inventory, there were at least twenty interim assessments in use by school districts in the 2020-

21 school year (Exhibit 6). Amplify Education/Cambium Learning: DIBELS Next and IDEL was the most used interim assessment (n = 80 districts in 2020-2021 school year), followed by NWEA Map Growth which was used by 62 districts in 2020-2021. Other popular interim assessments include Renaissance Learning: Star Reading, Amplify Education: DIBELS 8th edition, Renaissance Learning: Early Star Learning, Northwest Evaluation Association Measures of Adequate Progress (MAP) and the Measure of Adequate Progress Primary Grade (MPG).

Site visits included a discussion at each site of the process for identifying students that have Significant Reading Deficiencies (SRDs) as outlined under the READ Act. Questions were designed to gather data on a variety of topics, including the process used to identify SRDs, challenges or successes with this process, additional guidance and support which might be needed, and impacts of the COVID-19 pandemic. Inventory topics focused on assessment use and changes in assessment over time.



Identifying Significant Reading Deficiencies

Exhibit 6. Number of Districts Reporting Interim Assessments in Use, by School Year

Interim Assessment	2017-18	2018-19	2019-20	2020-21
Amplify Education: DIBELS 8th Edition	39	38	35	38
Amplify/Cambium Learning: DIBELS Next and IDEL	83	82	84	80
Curriculum Advantage Inc.: Classworks Reading/ English Language Arts Universal Screener	1	1	1	1
Curriculum Associates: i-Ready	18	17	19	21
FastBridge Learning: FAST Early Reading English (k-1) FAST CBMreading English (1-3)	2	3	2	2
Formative Assessment System for Teachers (FAST): Formative Assessment System for Teachers (FAST)	4	5	5	5
Greenwood Publishing DBA Heinemann: Benchmark Assessment System and Sistema de Evaluacion de la Lectura	2	1	1	
Istation: ISIP ER and ISIP Spanish	7	10	10	13
Lexia Learning Systems: RAPID Assessment	5	7	9	8
Lexplore: Lexplore	1	1	1	2
Northwest Evaluation Association: Measure of Adequate Progress (MAP) and the Measure of Adequate Progress Primary Grade (MPG)	22	21	20	21
NWEA: Map Growth	61	59	58	62
NWEA: NWEA Map Reading Fluency	17	16	19	20
PALS Marketplace: Phonological Awareness Literacy Screening PALS and PALS Espanol	10	10	9	10
Pearson: Aimsweb English	12	12	12	11
Pearson: Development Reading Assessment 2nd Edition DRA2 and Evaluacion del Desarrollo de la Lectura Segunda Edicion (ELD2)	7	5	5	5
Renaissance Learning: Star Early Learning	26	26	28	27
Renaissance Learning: Star Reading	34	33	37	35
Riverside Insight: easyCBM	1	2	1	1
Riverside Insight: Iowa Assessment			1	1

Note: 151 Districts Accessed the LEP Inventory.

Source: LEP Responses on LEP Inventory.



Identifying Significant Reading Deficiencies

Students identified as “red” or “yellow” based on their interim assessment scores are, in most cases, then placed into a progress monitoring sequence where they are administered “diagnostic assessments” to help determine if the student has an SRD, to diagnose the likely causes of the SRD, and to inform instructional strategies to best support that student.

According to the LEP inventory, 11 different diagnostic assessments were in use by school districts during the 2020-2021 school year. Over seventy districts reported using the Voyager Sopris: DIBELS Deep: Phonemic Awareness, Word Reading Decoding, Comprehension, Fluency, and Oral Language. Other popular diagnostic assessments include Renaissance: STAR Early Literacy Assessment and Curriculum Associates: I-ready (Exhibit 7).

Exhibit 7. Diagnostic Assessments in Use as Reported by School Districts on the LEP Inventory

Diagnostic Assessment	2017 18	2018 19	2019 20	2020 21
Curriculum Associates : I-ready	18	17	21	24
Heinmann: Benchmark Assessment System	3	2	2	2
McGraw Hill: Acuity	1	1	1	1
Northwest Evaluation Association : Chidren's Progress Academic Assessment CPAA	4	5	5	4
PALS Marketplace: Phonological Awareness Literacy Screening (PALS) and PALS Espanol	11	10	10	9
Pearson : DRA2	9	6	4	4
Pearson : Peabody Picture Vocabulary Test	4	4	4	4
Pearson : Woodcock Reading Mastery Test 3rd Edition (VRMT-III)	5	6	5	6
Renaissance : STAR Early Literacy Assessment	33	33	35	38
Riverside Insight: Woodcock Munoz LS (English and Spanish)	3	3	3	4
Voyager Sopris: DIBELS Deep: Phonemic Awareness, Word Reading Decoding, Comprehension, Fluency, Oral Language)	77	74	72	73

Note: 151 Districts Accessed the LEP Inventory.

Source: LEP Responses on LEP Inventory.

Typically, progress monitoring occurs over an 8-10 week period, with diagnostic assessments administered every 2-3 weeks. After each assessment is administered, classroom teachers and reading interventionists (when such



Identifying Significant Reading Deficiencies

staffing exists at a school) review the diagnostic assessment data and attempt to design instructional interventions to address the student's reading challenges. These interventions typically take place during small group instruction or during pull-out time from the classroom. If, at the end of this progress monitoring period, assessment data show that the student's reading ability has not made sufficient growth, then the student is typically diagnosed as having an SRD, and the process commences for creating a READ Plan.

One approach to the SRD identification process that has developed over the past several years is a "body of evidence" approach which school leaders indicate is supported by CDE. This approach attempts to use a more holistic method of identifying the existence of an SRD. This includes not only use of diagnostic assessment data, but also teacher-generated formative and summative assessments, as well as teacher and reading interventionists' professional judgement based on working closely with each student.

Challenges, Opportunities, and Lessons Learned

A key challenge with regard to SRD designation is the **need to ensure that teachers have the training to properly diagnose the particular literacy challenges each student faces**. Developing this capacity requires that teachers and other staff in schools have the training to correctly administer interim and diagnostic assessments and to use the resulting data to properly identify and diagnose SRDs. School leaders report that teacher hires who are new to the profession typically are not adequately trained to diagnose SRDs.

Another challenge raised – particularly during site visits in districts with larger numbers of students who are English Learners – is **a concern with improperly diagnosing EL students as having an SRD**. School leaders in these districts report that often students whose primary language is not English may struggle to read not because they have an SRD, but because they are attempting to read in a language that is not spoken regularly at home. These



Identifying Significant Reading Deficiencies

leaders indicate treating EL students the same as native English speakers for purposes of the READ Act can trigger a demoralizing and counterproductive process for students, their parents, and their teachers. This is because the SRD designation is viewed by some students and their families as a stigma. From the district's perspective, it is important to receive the added per-pupil funding that is provided under the READ Act to fund added supports for EL students who are struggling to read in English. However, school and district leaders struggle with giving an SRD designation to those EL students whose reading challenges are language-based. School leaders also indicate the need for additional approved assessment tools that can assess students in their native languages.

School and district leaders during site visits were very supportive of the option to use a “body of evidence” to make student SRD determinations. These leaders express a belief that providing space for educators to take a more wholistic approach to assessing student literacy needs is appropriate and respects the professional judgement of those education professionals who work closest with students. School leaders also indicated that using this approach requires added time and training for teachers to execute effectively.

School leaders consistently report significant challenges to the SRD identification process brought on by the COVID-19 pandemic starting in spring 2020 and continuing through the 2020-21 school year. These include:

1. A lack of reliable and accurate assessment data has impacted teacher ability to properly diagnose students with SRDs during the pandemic. **Data produced through interim and diagnostic assessments administered to students at home during the pandemic are almost universally viewed as less reliable for several reasons**, including:
 - Parents or older siblings may attempt to help the student as they take the assessment, yielding inaccurate results.



Identifying Significant Reading Deficiencies

- Internet connection quality can vary widely, causing technical difficulties with test administration.
 - Distractions in the home impede students' ability to maintain their focus on the assessment.
 - Students at home do not always show up for their assigned online assessment, which creates significant pressure on teachers to communicate with parents to arrange assessment times and to ensure the student is present to take the assessment at the arranged time.
2. **Challenges with gathering reliable assessment data are reported to be most pronounced for students living in poverty.** For instance, children in poverty typically have less reliable internet connections or access to reliable computer equipment. Such students may also have less space and opportunity to find a quiet area to take assessments online.
 3. Due to the challenges associated with assessing students during the pandemic, **student SRD designation numbers may see significant swings** during the 2020-21 school year.

Site visit school leaders indicate that, as students returned to in-person instruction at various points during fall 2020, assessment data indicate larger numbers of students than in prior school years were scoring in the lowest (red) performance bands. School leaders attribute this significant increase to the shutdown of all in-person instruction in spring 2020. **The pandemic's shutdown of in-person instruction had a particularly negative impact on high poverty students, according to school leaders.** The extent of this impact was not yet fully known at the time of site visit interviews (fall 2020 and early winter 2021) since schools were in the process of administering more reliable, in-person assessments as students returned to school.



6

Development and Implementation of READ Plans

Site visits included a discussion at each site of the process for creating student Read Plans as required under the READ Act. Questions were designed to gather data on a variety of topics, including how READ plans are developed, which school or district staff are primarily responsible, how parents are involved in the process, and any challenges, successes, or lessons learned.

- **READ Plans are typically created by classrooms teachers with the support of other school staff**
- **Schools with consistent staff support (e.g., reading interventionist or coach) tend to indicate there is higher consistency and fidelity to READ Plan development and process**

Parent involvement in the process is critical to the success and effectiveness of READ Plans

- **READ Plan development is perceived to be compliance oriented, duplicative, or burdensome at times**



Development and Implementation of READ Plans

Most, if not all students in site visit schools who are identified as having an SRD are placed on a READ plan. Typically, each student's grade level classroom teacher is the staff member primarily responsible for READ Plan design and implementation. Classroom teachers receive varying degrees of support in this process from reading interventionists, school-level coaches, or school administrators, with support focused on assisting the classroom teacher in identifying the most appropriate instructional strategies for addressing the student's particular needs. Coaching or reading interventionist support can play an important, positive role. In fact, **schools where consistent staff support was provided to classroom teachers in creating READ Plans – such as through a reading interventionist or coach – tend to indicate there is higher consistency and fidelity to the process across classrooms and grade levels.**

Site visits included a discussion at each site of the process for creating student Read Plans as required under the READ Act. Questions were designed to gather data on a variety of topics, including how READ plans are developed, which school or district staff are primarily responsible, how parents are involved in the process.

READ Plans are typically created starting in the mid- to late-fall, after teachers have had the opportunity to: 1) administer reading assessments to students near the beginning of the school year; 2) progress monitor those students whose initial assessment results indicate a potential SRD; 3) administer diagnostic assessments to zero-in on the particular reading challenges that each student faces; and 4) discuss data with reading interventionists, coaches, or other colleagues to make a final determination on SRD status and the appropriate focus of the student's READ Plan. READ Plans in most site visit schools are loaded into an online platform such as the Alpine, Infinite Campus, or other district-selected data management system. Schools and districts give mixed reviews of the ease which READ Plan components can be entered into these existing online platforms.



Development and Implementation of READ Plans

Once a draft READ Plan is created, teachers in most schools then utilize fall parent-teacher conferences to discuss the plan's content, to review the assessment data which informed the plan's design, and to discuss with parents the intended instructional strategies that will be used to meet the student's needs. Teachers also use the parent conferences – including follow-up conferences in the spring – to discuss opportunities and strategies for parents to support their student at home. Teachers in some schools report they would benefit from additional guidance or a set of specific, suggested strategies to offer parents – beyond simply reading to their child at home – that more effectively support their child's literacy development at home.

The level of parent capacity to attend conferences with teachers and to support students at home can vary significantly across schools. However, **parent involvement in the process is viewed as a critical element to the success and effectiveness of READ Plans, and strong parent involvement and support at home can greatly enhance overall impact.**

School leaders indicate that READ Plans often do not automatically follow students with SRDs who were previously served in another Colorado school district. Instead, school leaders sometimes must specifically request such plans be provided by the prior district, which can be time consuming. Many school leaders and staff, however, also indicate a preference for “starting over from scratch” with any new student who arrives at the school with an SRD, which includes administering assessments, reviewing data, and creating a new READ Plan for that student. This preference for re-starting the READ Plan creation process for new students who were served in other districts appears to be driven by each school's desire to diagnose student needs using assessments most familiar to the school's staff. Likewise, school leaders express a preference for creating READ Plan intervention strategies tailored particularly to the instructional curricula and programs in their school (which may differ from the curricula and programs in place at the student's prior school).



Challenges, Opportunities, or Lessons Learned

A key challenge with regard to READ Plan development is the need to ensure that teachers have the capacity, support, and training to identify the most appropriate instructional strategies available to meet each student's specific literacy challenges. This requires that teachers and reading interventionists not only are able to use diagnostic assessments to appropriately identify student reading deficiencies, but that they are then able to translate accurate diagnoses into actionable READ Plan goals and strategies. Some districts or schools have created strategy “crosswalks” to facilitate teacher alignment of READ Plan goals with common reading deficiency areas.

A common challenge heard across site visits was that, while READ Plans have some utility for teachers, **the process of creating the Plans is viewed as “compliance-oriented,” added paperwork that can be time consuming and administratively burdensome.** Teachers, coaches, interventionists, and school leaders often do not view the time investment required to create READ Plan documentation as proportional to the added value that such documentation produces in the classroom.

In some cases, school leaders indicate the content of READ Plans are viewed by their staff as duplicative with other required documentation. Such duplicative documentation could include overlaps with Individualized Education Plans required for students in special education who often also have SRDs, or with school-level planning documents that teachers are asked to create as part of district or school-level Response to Intervention (RTI) programs.

Another challenge frequently cited is a lack of clarity in terms of how best to exit students from READ Plans once such plans are created.

Leaders from multiple site visit schools indicated that once students are assigned a READ Plan, they often remain on the plan year after year. These leaders indicate that clearer criteria for exiting students from plans, and more training or



Development and Implementation of READ Plans

support for teachers and reading interventionists would be valuable to help create more consistency in the process for exiting students off their READ Plans.

The COVID-19 pandemic has impacted READ Plan development and implementation in several ways. Most notably, online assessment is universally viewed as less reliable and effective. The pandemic also in some cases caused delays in delivering the assessments. The lack of timely and reliable assessment data impacted the ability of teachers and literacy leaders in schools to appropriately diagnose student needs and to design appropriate intervention strategies in READ Plans. The pandemic also negatively impacted the ability of teachers to meet with parents to discuss the content of READ Plans, and to outline how parents could best support READ Plan goals with activities at home.



7

Student Outcomes

Data on K-3 student SRD status and student third grade English Language Arts (ELA) scores on the Colorado Measures of Academic Success assessment (CMAS) helps to document the rates at which students were diagnosed with an SRD, the rates at which students moved off of an SRD designation, and the extent to which CMAS proficiency rates differed between SRD and non-SRD students.

- **The overall SRD rate consistently increased as students progressed toward third grade, with more students diagnosed with an SRD each year than were moved off of an SRD designation.**
- **Nearly all of the students who are identified with an SRD do not achieve proficiency in third grade on the CMAS ELA.**
- **The evaluation team recommends convening a psychometric panel in Year 2 of the evaluation to inform CDE and the evaluation team as to how to best operationalize growth to standard.**



Changes in Students' SRD Status

The total number of students identified with SRD each year has varied between 38,000 – 41,000 annually (Exhibit 8). That said, the total number masks movement in and out of SRD status, as described below.

Exhibit 8. Statewide K-3 Student SRD Status, by School Year

	2015-16	2016-17	2017-18	2018-19
Yes	38,228	40,533	39,612	41,002
No	214,802	218,246	215,495	209,908
NA	3,655	3,972	4,248	3,910
Grand Total	256,685	262,751	259,355	254,820

Annually, around 12,000 - 13,000 students move from not having an SRD designation to having one while around 8,000 who have an SRD designation are determined to no longer have an SRD designation (Exhibit 9).¹¹

Exhibit 9. Students Moving Between SRD Designations

	2015-16	2016-17	2017-18	2018-19
No SRD to Yes SRD	12,204	12,893	12,015	12,515
Yes SRD to No SRD	7,626	7,728	8,353	7,263

	2015-16	2016-17	2017-18	2018-19
No SRD to Yes SRD	4.8%	4.9%	4.6%	4.9%
Yes SRD to No SRD	3.0%	2.9%	3.2%	2.9%

The number of students who continue to have an SRD designation from one year to the next has increased annually, from 16,205 in 2015-16 to over 18,000 in 2018-19 (Exhibit 10). From the 2015-16 school year to the 2018-19 school year, the overall number of K-3 students who retained their SRD designation rose by about one percentage point, while the number of students who maintained a “No SRD” status remained largely unchanged.

¹¹ This figure excludes students' first instance in the dataset (approximately 30% of students each year, mostly Kindergarteners), as there is no prior year for comparison.



Exhibit 10. Students Maintaining Same SRD Status from Prior Year

	2015-16	2016-17	2017-18	2018-19
Remained Exempt	1,001	1,021	806	972
Remained No SRD	140,865	137,632	141,984	139,482
Remained Yes SRD	16,205	16,945	17,896	18,264

	2015-16	2016-17	2017-18	2018-19
Remained Exempt	0.4%	0.4%	0.3%	0.4%
Remained No SRD	54.9%	52.4%	54.7%	54.7%
Remained Yes SRD	6.3%	6.4%	6.9%	7.2%

Examining SRD rates by cohort can provide a longitudinal perspective on the reading abilities of a specific group of students. **A cohort analysis of student SRD status indicates that the overall SRD rate consistently increased as students progressed toward third grade, with more students diagnosed with an SRD each year than were moved off of an SRD designation.** Exhibits 11 through 14 each follow a cohort of students from their Kindergarten year onward, tracking annual SRD status and any change in status from the previous year. For example, the first bar in Exhibit 11 depicts the 2014-15 SRD status for the 15,012 students in the READ assessment dataset who started Kindergarten in 2014. The subsequent bars show the annual SRD status rates for this *same* group of students as they progress to first, then second, then third grade across the years (some students in the dataset may repeat grades). The lines connecting each bar indicate how many students moved from one status category to another or remained in the same status category. Each of the four cohorts examined expresses the same pattern of an SRD rate that increases as students move toward third grade, suggesting that, while some students do improve their reading performance and test out of the SRD designation, more students each year are falling behind and acquiring or maintaining an SRD designation.



Student Outcomes

Exhibit 11. SRD Status of 2014-15 Kindergarten Cohort (starting n = 15,012)

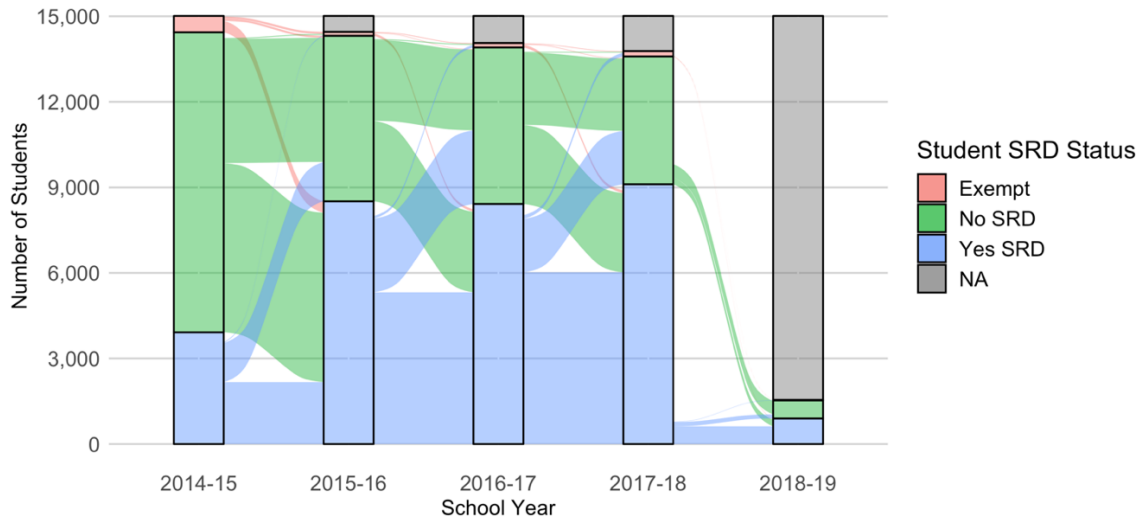


Exhibit 12. SRD Status of 2015-16 Kindergarten Cohort (starting n = 14,186)

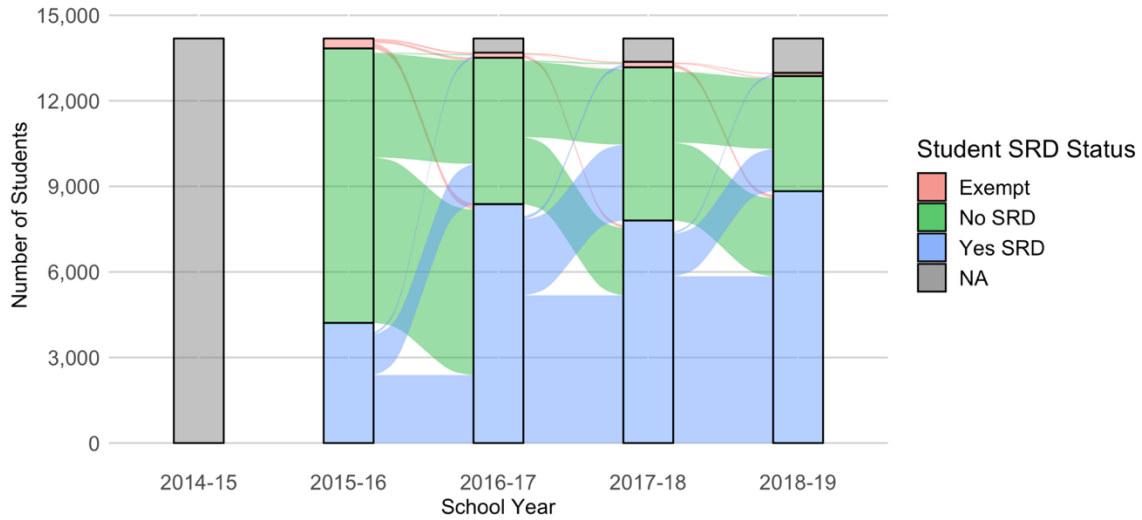




Exhibit 13. SRD Status of 2016-17 Kindergarten Cohort (starting n = 14,511)

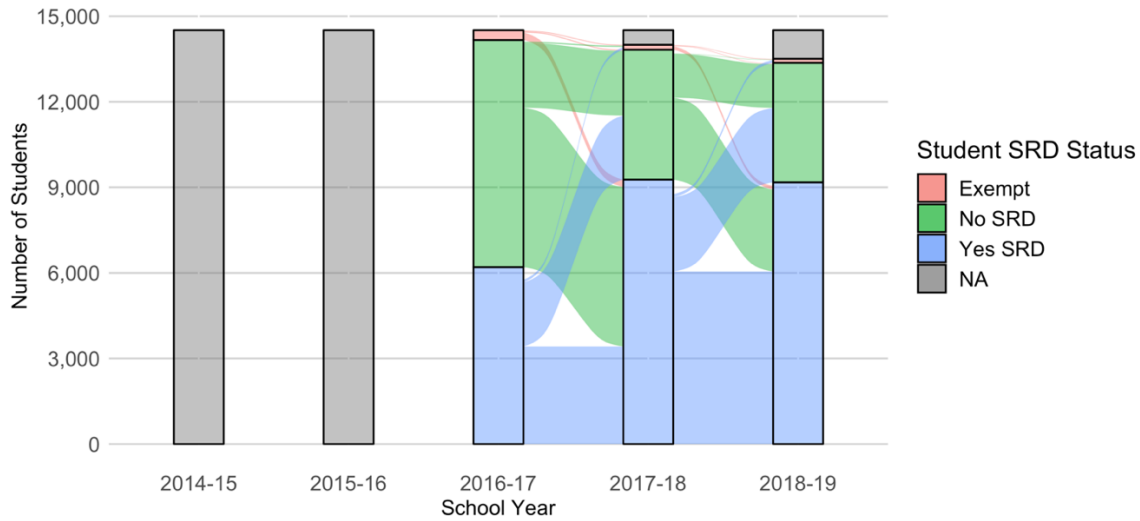
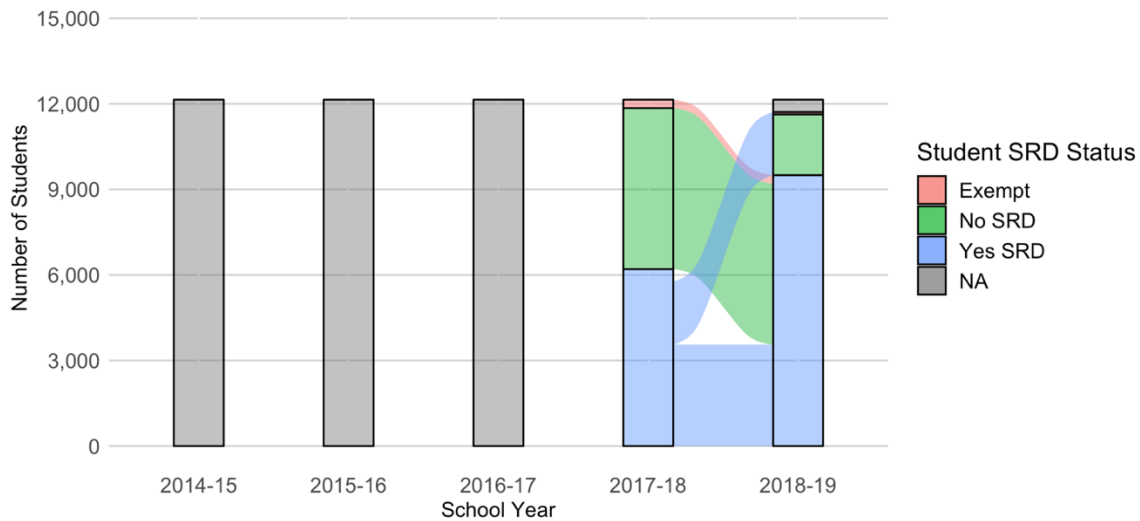


Exhibit 14. SRD Status of 2017-18 Kindergarten Cohort (starting n = 12,143)



Colorado Measure of Academic Success (CMAS) Proficiency and Significant Reading Deficiency Status

Students first take the Colorado Measure of Academic Success (CMAS) assessment in third grade, the final year in which interim READ assessments are given. Since the goal of the READ Act is to identify struggling readers and provide them with the supports they need to read proficiently by the end of third



Student Outcomes

grade, third grade CMAS scores provide one way to gauge the extent to which early literacy interventions are moving students toward third-grade proficiency. Annually, fewer than 1,000 students who ever had an SRD designation achieve third-grade CMAS English Language Arts (ELA) proficiency (Exhibit 15). That is, **nearly all of the students who are identified with an SRD do not achieve proficiency in third grade on the CMAS ELA.** Among students who never receive an SRD designation, over half meet or exceed proficiency levels on third grade CMAS ELA.

Exhibit 15. Third-grade English Language Arts CMAS Proficiency by SRD Status

		2014-15	2015-16	2016-17	2017-18	2018-19
Never SRD	Approached, Did Not Yet Meet, or Partially Met Expectations	29,097	27,212	22,962	22,166	20,543
	Met or Exceeded Expectations	23,763	22,562	24,957	24,806	24,242
Ever SRD	Approached, Did Not Yet Meet, or Partially Met Expectations	9,417	11,935	14,758	15,222	14,805
	Met or Exceeded Expectations	67	157	397	562	683

Students who have been identified as having an SRD achieve third-grade ELA proficiency at rates far below their peers who have never been diagnosed with an SRD (Exhibit 9). Less than 5% of students who have ever been identified with an SRD achieve grade-level ELA proficiency on CMAS in third grade, while about half of their non-SRD peers do. However, the proficiency rate for this group has risen steadily over the past five years.



Exhibit 9. CMAS Reading Proficiency Rate for Students Identified with an SRD*

Year	CMAS ELA Proficiency Rate
2014-15	0.71%
2015-16	1.30%
2016-17	2.62%
2017-18	3.56%
2018-19	4.41%

*Expressed as the percent of third grade students who have at any time been diagnosed with an SRD and who “Met or Exceeded Expectations” on the CMAS English Language Arts assessment, divided by the total number of third grade students who have at any time been diagnosed with an SRD.

Growth to Standard

Key questions driving this evaluation include to what extent do students identified with significant reading deficiencies (SRD) achieve significant growth to standard, and what are the most effective processes, procedures, methods, and strategies that lead to students with SRDs making significant growth to standard. The revised READ Act of 2019 requires the Colorado Department of Education (CDE) to define “sufficient...growth to standard” over time for students identified as reading below grade level or with SRDs. The definition of growth to standard is: progress (change over time) that puts a student on a path to adequately demonstrate proficiency by the end of third grade.

CDE worked with the Central Regional Educational Laboratory (REL Central) to define a way to measure growth to standard. In December 2020, CDE decided to rely on a projection model to measure growth to standard. In the projection model, assessment scores from the previous cohort are used to develop predictions of how a student with a particular score in an early grade will score in later grades.¹² Scores from previous cohorts of students who have

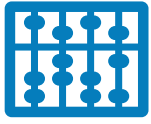
¹² Castellano, K. E., & Ho, A. D. (2013). *A Practitioner's Guide to Growth Models*. Council of Chief State School Officers. Available from <https://scholar.harvard.edu/andrewho/publications/practitioners-guide-growth-models>.



completed the future grade of interest (in this case, third grade) are used in regression models to predict the relationship between test scores in earlier grades and in third grade. Those predictions are then applied to the current cohort to predict their third-grade test score. The predicted future score is compared to the proficiency cut score. If the comparison is at or above the cut score, then the student is said to be meeting growth to progress. If the predicted score is below the proficiency cut score, then the student is said to not be meeting growth to standard.

One challenge in Colorado is that there are multiple K-2 reading assessments in use by school districts (see Exhibit 6, above). According to responses to the LEP survey conducted between November 2020 and April 2021, there were at least ten interim assessment systems in use by a minimum of eleven school districts in the 2020-21 school year. Furthermore, there were ten other assessments that were in use by only a few school districts. However, LEPs responding to the survey indicated that there were only two summative assessments in use – Curriculum Associates: i-Ready and Northwest Evaluation Association: MAP for Primary Grade. Each of these assessment systems measures reading at grade level¹³ differently and uses different scales. Furthermore, school districts may change assessment systems, especially in years when CDE reviews assessment systems. Given the current assessment system, we recommend the convening of a psychometric panel to aid CDE and the evaluation with determining whether growth to standard can be measured and, if so, then develop how the evaluation can compute growth to standard.

¹³ Note that reading at grade level applies to kindergarten through second grade, while grade level proficiency applies to third grade and beyond. Test vendors define K-2 reading at grade level for each of their assessments and there are not requirements that these definitions and metrics be consistent. CDE established grade level proficiency cut scores on the state CMAS assessments.

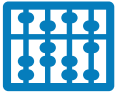


8

Conclusions

In this first year of the evaluation of the Colorado READ Act, we can report that schools and districts value the READ Act and have taken many efforts to implement it. These efforts include greater literacy instructional time for all students using various strategies; a data-driven MTSS approach for struggling readers; and greater emphasis on attempts to hire teachers who are well-versed in the scientifically based reading components.

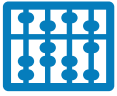
- **Instructional coaches, reading specialists, and other personnel dedicated to supporting reading instruction and interventions are crucial to training and supporting classroom teachers. However, these positions are difficult to maintain in the absence of additional grant funding.**
- **Schools and districts report the need for additional support in identifying specific needs and literacy strategies for English learners.**
- **Fewer than five percent of students identified with a significant reading deficiency (SRD) achieve third-grade proficiency on the Colorado Measure of Academic Success English Language Arts assessment.**



Conclusions

In this first year of the evaluation of the Colorado READ Act, we can report that schools and districts value the READ Act and have taken efforts to implement it. These efforts include greater literacy instructional time for all students using various strategies; a data-driven MTSS approach for struggling readers; and greater emphasis on attempts to hire teachers who are well-versed in the scientifically based reading components. School and district leaders appreciate the identification of curricular and reading intervention programs, assessments, and professional development programs that have a research base to support their use. Despite these, however, **fewer than five percent of students identified with a significant reading deficiency (SRD) achieve third-grade proficiency on the Colorado Measure of Academic Success (CMAS) English Language Arts (ELA) assessment.** Patterns of SRD designation indicate that more students are identified with SRD than are removed from that designation each year.

School interviews identified several challenges that schools and districts face. Primary among these challenges are several human capital-related issues. **Schools and districts report that, while they would like to recruit teachers who are well-versed in the science of reading, these teachers are hard to find; neither new graduates of schools of education nor experienced teachers possess the deep understanding of reading needed.** As a result, schools and districts must expend significant resources to train and support newly hired teachers even if they had already taught reading in another school or district (given the plethora of available instructional and intervention programs). To sustain those training efforts, school leaders indicated the important of instructional coaches, reading specialists, and other personnel dedicated to supporting reading instruction and interventions. The funding needed for these positions and for in-depth professional development required is beyond the means of most districts and schools. The Early Literacy Grants are valued for their ability to support these activities but are difficult to sustain once the grant ends.



Conclusions

- *Given these challenges, we recommend that Year 2 of the evaluation include an additional focus on the effective human capital strategies to effectively recruit, train, and retain key instructional personnel as well as to sustain existing investments supported by per-pupil and ELG funding.*

An additional challenge that the virtual site visits identified is that of the needs of English learners (ELs). **Schools and districts report needing more information about correct identification procedures – that is, when is it appropriate to identify an EL with an SRD and how to correctly attribute challenges with reading to language unfamiliarity or to reading deficiencies.** Furthermore, schools and districts indicated that they need better understanding how to address the needs of ELs with SRDs. Currently schools use dual language approaches, co-teaching models, and other strategies to serve EL students. Additional guidance on the efficacy of these approaches and key implementation considerations would be valuable.

- *Given these challenges, we recommend that Year 2 of the evaluation include a specific focus on the EL experience as it relates to READ Act implementation.*

Additionally, there are multiple K-2 reading assessments in use by school districts and each of these assessment systems measures reading at grade level differently and uses different scales. Furthermore, school districts may change assessment systems, especially in years when CDE reviews assessment systems. Thus, **schools and districts as well as the state may struggle to effectively growth to standard.**

- *Given these challenges, we recommend convening a psychometric panel consisting of experts from WestEd, CDE, school districts, and test vendors in Year 2 of the evaluation to inform CDE and the evaluation team as to how to best operationalize growth to standard.*



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Appendix 1: The Foundations of Scientifically Based Reading

Decades of research have demonstrated the importance of reading proficiency in the early elementary grades. Around third grade, students transition from developing foundational reading skills (“learning to read”), to using reading as a tool for acquiring information (“reading to learn”) (Adams, 1990). These early years are a critical time for intervening to support struggling readers, since students who do not have the ability to read independently by third grade are at risk of falling behind academically in subsequent grades. Longitudinal studies have shown that students with low reading test scores in third grade are less likely to complete high school (Lloyd, 1978), failing to graduate on time at a rate four times higher than their proficient peers (Hernandez, 2012).

Recognizing the importance of reading in the early grades, the United States Congress asked the National Institute of Child Health and Human Development to establish a National Reading Panel (NRP) that would perform a comprehensive and informed synthesis of the research around effective methods for teaching children to read. In 2000, the 14-member Panel released its report, identifying five instructional components that are essential for early-grade reading development: phonemic awareness, phonics, fluency, vocabulary, and text comprehension (Langenberg et al., 2000). In a minority view included with the report, Panel member Joanne Yatvin cautioned Congress in interpreting the NRP findings as definitive, claiming that the scope of topics that NRP examined was biased and narrow, and that the Panel had neither the time nor resources to conduct analyses with the rigor required to answer their research questions with certainty. Still, the NRP findings have had substantial influence on both policy and practice, as the five essential components of reading have become widely accepted as best practices in reading instruction.

Following the passage of the No Child Left Behind Act in 2001, and its emphasis on increased instructional time for reading, numerous funding and



policy initiatives emerged aimed at raising early-grade reading proficiency rates. At the federal level, Reading First provided roughly one billion dollars in grants each year from 2002 through 2008 to support the instructional practices recommended by the NRP (US Department of Education, 2015). At the state level, at least 26 states have passed reading laws since 2000 that are aimed at promoting financial support, accountability measures, procedural requirements, and interventions that will improve third grade reading proficiency rates (Center on Enhancing Early Learning Outcomes, 2019). Most of these laws reference or require “scientifically based” reading instruction, interventions, and curricula, although by the time many of these laws were passed the five essential components of reading had already been adopted by major publishers and teacher training programs in response to the NRP Report (Herlihy et al., 2009).

With the proliferation of curricula, interventions, teacher professional development programs, and assessments centered around these five essential components has come a large body of empirical research aimed at determining the efficacy of targeting these components. In fact, there have been so many studies on early reading instruction and intervention, that researchers have been able to conduct meta-analyses, whereby the authors attempt to identify all high-quality studies on a given topic and use statistical modeling to produce a more accurate impact estimate than any one study alone could provide. What follows is a short summary of recent meta-analytic findings on each of the five essential components of reading for Pre-K through third grade students.

Phonemic Awareness. Phonemic awareness – the ability to notice, distinguish, and manipulate the individual sounds in spoken words (Liberman et al., 1974) (e.g., the word “juice” has three phonemes, “j-,” “ooo”, and “sss”) – is a strong predictor of students’ later reading abilities (e.g., Share et al., 1984; Snider, 1997). Research indicates that explicit instruction on phonemic awareness is highly effective in promoting the development of the skill itself, and leads to moderate improvements in reading overall (Bus & Van Ijzendoorn, 1999; Ehri, Nunes, Willows, et al., 2001). Longitudinal studies have shown that



interventions focused specifically on supporting phonemic awareness were found to have lasting impacts on student reading proficiency, showing a greater effect one year after the end of the interventions than interventions focused more on phonics (Suggate, 2016).

Phonics. Phonics is an instructional approach where students learn to sound out and blend letters in order to decode a word (which is a different skill than understanding what that word means). Explicit and systematic teaching of phonics has been shown to improve student decoding, spelling, and comprehension to a statistically greater degree than instruction without a focus on phonics (Ehri, Nunes, Stahl, et al., 2001; Jeynes, 2008). Research on phonics instruction specifically for low-performing readers similarly finds systematic phonics instruction to improve reading outcomes (Mcarthur et al., 2018). Explicit phonics instruction was found to have a smaller effect over time than instruction focusing on phonemic awareness and comprehension (Suggate, 2016).

Fluency. Fluency refers to the relative degree of ease and automaticity with which letters are understood as words, words are understood for their meaning, and comprehension of a subject is derived from that meaning (Wolf & Katzir-Cohen, 2009). At higher levels of reading fluency, mental attention can be devoted to comprehension rather than the mechanics of reading, and fluency is therefore considered a critical link between word analysis and text comprehension. The developmental definition of fluency makes it difficult to study empirically, and evidence around the effectiveness of interventions and approaches to support fluency is mixed. There is some evidence that repeated reading and the modeling of reading (either in person, or via audiobook) can improve fluency and comprehension (Chard et al., 2002; Stevens et al., 2017), but more rigorous empirical research is needed to understand how to best improve reading fluency in the early grades.

Vocabulary. Understanding text requires the construction of meaning from known words (Kamil, 2004), making vocabulary an important component of reading comprehension. There is strong consensus that size of a student's



vocabulary is predictive of how well they will understand what they read (e.g., Scarborough, 2001). Recent research indicates that interventions supporting vocabulary development are effective in improving expressive and receptive vocabulary (Marulis & Neuman, 2010). There is evidence that such interventions are also effective in improving comprehension of texts aligned with the intervention, but there are fewer studies finding that these interventions improve generalized reading comprehension (Elleman et al., 2009; Wright & Cervetti, 2017). Multidimensional approaches to learning words (e.g., providing contextual information around a set of words) tend to have a stronger impact on student reading comprehension than instruction focused on definitions (Stahl & Fairbanks, 1986; Wright & Cervetti, 2017).

Text comprehension. Text comprehension is the overall goal of reading instruction and occurs when students can process the text they read, derive meaning from it, and integrate that meaning with what they already know. Gough and Tunmer's (1986) influential model of reading comprehension describes successful reading comprehension as dependent upon two foundational components: decoding and linguistic comprehension. Others have argued that fluency is a third critical component for supporting text comprehension (Joshi & Aaron, 2000; Solari et al., 2018). While some meta-analytic reviews show that decoding (García & Cain, 2014) and linguistic comprehension are each important predictors of reading comprehension, others found the effects to be small or inconclusive (Mcarthur et al., 2018). Part of the challenge in studying the effect of foundational components on reading comprehension is that the most important components for reading change with students' age. In elementary school, for example, reading ability is largely based on print knowledge and phonological awareness, whereas in middle school reading accuracy and linguistic comprehension play a larger role in overall comprehension (Storch & Whitehurst, 2002). It is not surprising then that studies show interventions focused on phonemic awareness to be most appropriate for students entering elementary school, interventions focused on phonics and fluency to have greatest effects in



first and second grade, and interventions targeting comprehension overall to be most effective for third grade and beyond (Suggate, 2016).

Effective reading comprehension is dependent upon a complex and not entirely understood network of foundational skills that shift in their importance with a student's age and individual learning needs. In other words, when it comes to reading instruction one size does not fit all – and certain groups that have historically struggled with reading in the early grades require support and intervention beyond the typical reading curriculum. Effective reading instruction for ELs and students with disabilities, for example, shares many elements of reading instruction for proficient readers, but also includes additional practices and supports for these groups. Research shows that ELs benefit from frequent and intentional instruction focused on oral language development – in other words, including modifications and support to ensure that students understand the words and concepts they read (Goldenberg, 2020). Additionally, multiple systematic reviews of research have found that models focused on simultaneously strengthening students' home language and their English skills have been more effective than models that focus on English alone (Greene, 1998; Slavin & Cheung, 2005). Consequently, we would expect effective reading instruction for young ELs to include modifications that help them understand a language that is new to them, likely by utilizing native language supports or bilingual resources. While students with disabilities comprise a heterogeneous group with different challenges and needs, research has shown certain instructional strategies to benefit reading outcomes for many students in this group, including sustained multi-year interventions, one-one-one or small group instruction, systematic instruction on foundational reading components, and abundant opportunities for practice and feedback (Berkeley et al., 2010; Vaughn & Wanzek, 2014). We would expect effective reading instruction for young students with disabilities to incorporate personalized, targeted reading interventions that allow for supported practice of foundational skills.



Despite efforts to tailor instruction and improve reading outcomes for at-risk groups like ELs and students with disabilities, national reading outcomes for these groups have not improved in the last decade: on average, ELs and students with disabilities in fourth grade score far below even the “Basic” reading benchmark as measured by the National Assessment of Educational Progress (NAEP) (National Center for Education Statistics, 2019). Unfortunately, race and socioeconomic background are also predictors of student reading ability. While White and Asian students’ fourth grade reading scores have hovered at or around the NAEP “Proficient” benchmark, Black and Hispanic students’ scores fall around or below the NAEP “Basic” benchmark. Students who are not classified as economically disadvantaged tend to score near the NAEP “Proficient” benchmark, while students from economically disadvantaged backgrounds score, on average, around the NAEP “Basic” benchmark. These disparities in early elementary reading scores are alarming and the achievement gaps are not narrowing, underscoring the need for effective instruction and resources that work specifically to support at-risk groups.

Even with an ever-expanding body of research on reading mechanics and instructional best practices, most large-scale early literacy interventions have not produced the desired positive impacts on student reading achievement. Only a handful of rigorous impact evaluations have been conducted for large federal and state level reading initiatives, and they present mostly similar findings: some impact on instructional practices, but no impact on student reading performance. Following the Reading First funding initiative, for example, the Department of Education commissioned a study to examine the impact of Reading First on student reading proficiency. While the study found that teachers in Reading First schools received more professional development for reading instruction and spent more instructional minutes on the five essential components of reading, no impact on student reading performance was detected (Gamse et al., 2008). More recently, North Carolina State University evaluated the impact of the state’s Read to Achieve program, aimed at grade-level reading mastery for all third-grade



students. The study found no significant impacts on student reading achievement for students altogether, or for demographic subgroups (e.g., low income students or students with a disability) (Weiss et al., 2018).

One exception to these interventions which seemingly failed to impact student reading performance is Oregon's Reading First program, implemented from 2003 through 2009, which was shown by a rigorous multi-year evaluation to have improved student reading scores for students in kindergarten through third grade (Baker et al., 2007). This comprehensive evaluation analyzed data from three different cohorts of students over three years. A staggered implementation rollout (i.e., the first cohort began their Reading First activities in Year 1, the second cohort began in Year 2, etc.) allowed researchers to examine not only year-to-year impact, but also to analyze the magnitude of impact as schools became more experienced with the intervention. The Oregon Reading First evaluation found that schools receiving Reading First funding were more effective in improving student reading outcomes each year they implemented the intervention – in other words, they got better with experience. This finding is consistent with literature on effective educational interventions that has found consistent, sustained interventions to produce impacts of greater magnitude than short interventions (Borman & D'Agostino, 1996). These findings suggest evaluations of state reading policies and programs may need to be focused on longer-term outcomes in order to identify impacts on student reading performance.



Appendix 2: READ Act Resources

The Colorado Department of Education (CDE) has provided a number of resources and tools to schools and districts to aid in the successful implementation of the READ Act. Resource formats include professional development, evaluation tools, standards, best practices, fact sheets, and communication guides, among other tools. Specifically, the CDE website includes the following resources:

- **Incorporating the Science of Reading**¹⁴ is a comprehensive reading program that incorporates five essential components: phonological awareness, phonics, vocabulary, fluency, and comprehension. The state has developed several resources to support this program.
- The **Colorado Literacy Framework**¹⁵ defines the parameters for a consistent understanding and approach to literacy among Colorado’s educators. The framework presents research-based instructional approaches to foster communication skills (including oral and written language) and promote access, opportunity, and academic achievement.
- The **Elementary Teacher Literacy Standards**¹⁶ are part of the Elementary Education Endorsement (K-6) outlined in the Colorado State Board of Education Rules. In 2016, the endorsement was updated in the State Board Rules to ensure alignment to both to the Colorado Academic Standards as well as the Reading to Ensure Academic Success Act (READ Act). The Elementary Teacher Literacy Standards describe practices and competencies for all K-6 teachers to teach students to read proficiently.

¹⁴<https://www.cde.state.co.us/coloradoliteracy/resources>

¹⁵<https://www.cde.state.co.us/sites/default/files/documents/coloradoliteracy/clp/downloads/coloradoliteracyframework.pdf>

¹⁶<https://www.cde.state.co.us/coloradoliteracy/elementaryteacher-literacystandards>



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- The **Knowledge Base**¹⁷ provides a centralized source of information on literacy. This includes an overview of the science of reading, a webinar on reading acquisition, a guide to foundational skills for K-3, and several links to professional development resources.
- The **READ Act Communications Toolkit**¹⁸ provides a set of resources designed for district leaders, principals, and teachers to communicate with parents about the Colorado READ Act. All resources can be modified and personalized to meet individual school or district needs. Resources are currently available as fact sheets, videos, drop-in letters, and a sample social media campaign.
- The **READ Act Minimum Skill Competencies**¹⁹ is a set of competencies from the State Board Rules that is used to support classroom instruction and to assist teachers in developing reading goals for students on a READ plan. The READ Act Minimum Reading Competency Skills serve as a guide for the end-of-year skills necessary to indicate that a student is on track for acquiring basic grade-level reading skills. This includes: READ Act Minimum Skill Competencies for grades K-3 from the Colorado Academic Standards and the Minimum Reading Competency Skills matrix for all grades.

CDE also provides a variety of instructional supports²⁰ that include system- and school-level resources. The Colorado READ Act Rules define attributes for instruction at the universal instruction and targeted intervention levels. These resources can be used to support instruction for all students.

¹⁷<https://www.cde.state.co.us/coloradoliteracy/resources>

¹⁸<https://www.cde.state.co.us/communications/tools-readact>

¹⁹<https://www.cde.state.co.us/coloradoliteracy/resources>

²⁰<https://www.cde.state.co.us/coloradoliteracy/resources>



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Components include a reading universe grid, evaluation tool, tiers of instruction, direct literacy scan, outcomes-driven models, and reading coaches.

Since the onset of COVID-19, CDE also has dedicated a page of resources and guidelines for educators and families.²¹ This page includes a Q&A section, school reopening strategies, student assessments, deficiency identification, and a number of other resources.

In addition to instructional and direct impact resources, CDE also provides data under the **Read Act Data Dashboard**.²² This tool provides state, district, and school literacy financial data.

²¹ <https://www.cde.state.co.us/safeschools>

²² <https://www.cde.state.co.us/code/readactdashboard>



Appendix 3: Data Sources

Data Guidelines and Procedures

Unless otherwise specified, data analyses followed these guidelines and procedures. Data were received as Excel or comma-separated values (CSV) files and were lightly edited in Excel to remove extraneous rows such as sub-headers. Data were then imported into Stata. All major data manipulations were done in Stata and .do files were produced to document data manipulations and enable replication. Data were cleaned according to a shared set of conventions, which includes guidelines for variable naming and data formatting. Multiple analysts worked on each dataset and reviewed changes to ensure data integrity. Each dataset has an accompanying codebook that documents data values, variable titles, variable labels, and similar elements. Datasets are longitudinal and combine multiple years of data into single files. Preliminary files and codebooks were submitted as part of the Raw Data Deliverable in June 2020. Updated files, including those powering the dashboards to follow in this report, were included in the Raw Data Deliverable in April 2021 and will continue to be updated and submitted throughout the life of the evaluation, although changes will be made annually.

Extant Data

The Common Core of Data enabled the creation of a school-level locale file including every school operating in Colorado between 2014-15 and 2018-19. Analysts combined the datasets into a single contextual data file that included the period 2014-15 through 2019-20, when available. Not all datasets or variables are available at both the school- and district-level for each year; for example, school-level instructional enrollment for some programs is only available from the 2017-18 school year onward, and some race and ethnicity categories changed year to year. Select variables from other datasets were created and added to the contextual files, such as an indicator of whether a school ever received ELG funds.



Each year, CDE collects student-level interim assessment demographic data, including assessment types used to determine student SRD status, scores, and SRD and READ Plan designations. The data span 2013-14 to 2018-19 and include data for students in kindergarten through third grade. However, due to data irregularities in the 2013-14 school year, the first year of data collection for the READ Act, and discussions with CDE, the analysis begins in 2014-15. These data were provided by CDE as a series of year-by-year CSV files. The interim assessment and demographic data were received from CDE and carefully cleaned, using longitudinal codebooks to accurately and consistently name and represent each data element, some of which had changed sources, names, and values over time. For example, the variable indicating a student's gender existed in one source in early years and then changed source midway through the dataset, so a new variable was created to bridge the datasets and contradictory coding values. Many variables add new values over time as, for example, more assessments are used across the state. Year-by-year files were appended into one longitudinal data file.

To evaluate student growth and expand understanding of READ Act interventions' relationship to outcomes, WestEd requested additional data from CDE, in particular student-level data detailing achievement on the Colorado Measures of Academic Success (CMAS) examination and its alternatives. WestEd requested and received student-level data including but not limited to demographic variables (some of which overlap with the assessment data described above), assessment scores in math and English Language arts, and specific categories of READ Act interventions that students may have received, such as full-day kindergarten and summer school. These data span 2014-15 through 2018-19 and contain students in kindergarten through the third grade. The data were received in a longitudinal CSV file containing multiple years of data. The data were cleaned following the same general procedures described for the interim assessment data. Using the masked student IDs that uniquely identify each student across datasets, these data were merged with the interim



assessment data to create a single student-level longitudinal file describing the characteristics and performance of each student each year. The masked IDs were a perfect match, which is to say that each student present in the interim assessment data was also present in the CMAS data. Overlapping demographic variables between the datasets, such as grade, were checked against one another for consistency and consolidated. Analysts created additional variables to aid analysis- for example, indicators of student movement between districts and schools and more granular categorizations of how students transition between SRD statuses.

School- and district-level data were acquired by aggregating student-level data to show changes throughout the history of the READ Act in assessment use, SRD designation, READ Plan designation, CMAS English Language arts scores, and other indicators of interest to stakeholders. This also allowed for analyses between district- or school-level populations and the sub-population who are tested and belong to the assessment dataset. Masked IDs permit tracking students over time to explore how they transition through SRD and READ Plan statuses.

Inventories of School Districts and Enhanced Literacy Grant Recipients

WestEd received a list of e-mail addresses from CDE and then verified that list through e-mail, telephone, and web searches. The evaluation team began administering the inventories on October 16, 2020 by e-mailing each confirmed respondent a unique link to the inventory (total N surveyed was 174). WestEd sent a reminder e-mail to 162 unfinished respondents on October 23, 2020 and another reminder e-mail to 140 unfinished respondents on October 28, 2020. The evaluation team then sent another reminder on December 14, 2020. On January 29, 2021, the evaluation team submitted a list of nonresponding ELG recipients and LEPs to CDE for final follow-up. Between February 8 and 11, 2021, the ELG Coordinator in CDE followed up with nonresponding ELG recipients. On March 12, 2021, CDE contacted non-responding LEPs. We closed



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all surveys on March 23, 2021. Throughout the period, the project coordinator at WestEd fielded e-mail and telephone requests to assist respondents.

Eventually, 151 respondents accessed the LEP inventory and provided some information. Given that the inventory requested retrospective information, the expectation is that accuracy of response declines over time. Under normal circumstances, personnel turnover and recall bias will negatively impact information accuracy. However, administering the inventories during the COVID-19 pandemic as schools and school districts were wrestling with opening and closing decisions and delivering instruction to children through multiple means likely negatively impacted completion of all inventory sections. As a result, throughout this report, we present raw numbers of respondents and caution readers that they should not generalize beyond those counts.



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Data source(s)	Enrollment ²³	Race/Ethnicity Distribution ²⁴	Other enrollments of interest ²⁵	Mobility Rate ²⁶	READ Act Funding	Grade Level Distribution of Sample	Race/Ethnicity Distribution of Sample	Free/Reduced Meal Status of Sample	Assessment Usage Percentages	Average Assessment Scores	Student Movement Between SRD Designations	English Language Arts CMAS Proficiency and SRD Status
Publicly Available School Level Pupil Membership Data ²⁷	X	X	X	X								
READ Act Significant Reading Deficiency and READ Plan Demographic Assessment Data, provided by CDE						X	X	X	X	X	X	X
Colorado Measures of Academic Success English Language Arts Demographic Assessment Data, provided by CDE												X
READ Act Per Pupil Funding data, provided by CDE					X							
Publicly available CDE district revenue ²⁸					X							

²³ Membership by School and Grade Level (2015-20)

²⁴ Membership by School, Race/Ethnicity, Gender, Grade (2015-20)

²⁵ Pupil Membership by Instructional Program (2018-20); Free and Reduced Lunch Eligibility by School (2015-20)

²⁶ School Mobility Rates by Instructional Program Service Type (2015-20)

²⁷ Data described above are available here: <https://www.cde.state.co.us/cdereval/rvprioryearpmdata>

File names above are not consistent; they often change slightly by year but can be reasonably matched to the file names found online. When an option was given between K-12 and PK-12 file types, PK-12 was chosen.

²⁸ Data are available here: <https://www.cde.state.co.us/cdefinance/revexp>. Annual revenue for the 2019-20 school year was not available at the time these reports were published.



Appendix 4: Site Visit Selection Criteria

Site visit selection in the first year of the evaluation was a two-step data-driven process with a human touch to choose a practical and useful collection of sites to visit. First, analysts ranked schools based on a measure of how many students were moved off SRD designations in the previous three school years (SY 17 to SY 19). Second, analysts created an additional matrix of school-level characteristics to ensure the data selection included a diverse sample of school sites.

The student-level READ Act assessment data provided by CDE enabled analysts to rank schools by calculating the proportion of students that moved off SRD status who were in the same school for at least two years between 2017 and 2019. The aim was to identify those schools who were successful in moving students off SRD status using consistent, sustained set of interventions. Analysts computed proportions for all students as well as for several subsets of interest: ELs, students eligible for free-and-reduced meal (FRLs), and minority (non-white) students. Rates were not calculated if schools had fewer than 10 people in these groups (that is, fewer than 10 students per school with an SRD designation who remained for at least two years, summed across three school years) to increase rate reliability. Schools were percentile-ranked according to these rates. The percentile rankings were averaged for each school to create a single measure of success at moving children out of the SRD designation. It is important to note that the analysts did not assign a value judgement to a school's rate of moving students off SRD status. It is not our view at this time, nor do we have evidence that suggests, that moving students off SRD status more quickly is an indicator of higher quality teaching and learning, student experience, or school success. That is to say, the school rankings should not be considered as a metric to rank "good" or "successful" schools against their lower rank counterparts. It is simply a measurement of movement.



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A matrix of school-level characteristics was created and imposed on the ranking data to ensure a diverse set of site visit schools. Data on school-level characteristics came from public sources including School Performance Framework, student demographics, and U.S. Department of Education measures of school locale (urbanicity).

School-level characteristics included in the matrix:

- READ Act Assessment used (a range of assessments are represented)
- Colorado Region (all regions represented)
- Urbanicity (represent cities, suburbs, and towns/rural areas)
- Enrollment- total population (represent school sizes)
- Ethnicity demographics (ensure that schools with a range of demographic compositions are represented)
- FRL (range of FRL rates within high and low movement schools)
- ELs (range of EL rates within high and low movement schools)
- Mobility (range of mobility rates within high and low movement schools)

Analysts used the matrix to choose school sites using the procedure and rules of thumb that follow. The process is rooted in data but also relies on analysts' judgement. If another set of analysts were using the same data and followed the same procedure, we would expect the lists to be similarly composed, but to necessarily include the same schools. One analyst chose school sites for non-ELG schools, and another chose sites for ELG schools, according to the same procedure but comparing each set of schools with one another rather than ELG to the whole or vice versa.

Procedure:

- Remove any schools with fewer than 10 students with SRDs, summed across three years



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- Ensure that approximately 75% of the sample should be schools with high rates of student movement off of SRD, approximately 25% should be schools with low rates of movement off of SRD schools
- Include at least one school from each region
- As much as possible include a mix of high and low FRL, EL, and mobility rates in the high and low movement choices
- As much as possible include a range of urbanicities and primary assessments
- For ELG schools, include schools from each grant cohort

The analysis selected 29 sites to visit in the first year, 17 ELG sites and 12 LEP sites. Due to travel restrictions, the site visits were all conducted virtually. In the event that a site was unable to participate, analysts selected an alternative site with similar school characteristics and a similar percentile ranking. One district opted not to participate; the evaluation team conducted 28 virtual site visits.