

EDUCATIONAL INNOVATION



THE UTAH STATE BOARD OF EDUCATION
Report to the Public Education
Appropriations Subcommittee

K-3 Reading Improvement Program Report

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Sara Wiebke
K-3 Literacy Specialist
sara.wiebke@schools.utah.gov

Jennifer Throndsen
PreK-12 Literacy and Library Media Coordinator
jennifer.throndsen@schools.utah.gov

Diana Suddreth
Director of Teaching and Learning
diana.suddreth@schools.utah.gov

K-3 Reading Improvement Program Report

STATUTORY REQUIREMENT

U.C.A. Section 53A-17a-150 requires the State Board of Education to submit an annual report to the Public Education Appropriations Subcommittee on (i) student learning gains in reading for the past school year and the five-year trend; (ii) the percentage of third grade students reading on grade level in the past school year and the five-year trend; (iii) the progress of schools and school districts in meeting goals stated in a school district's or charter school's plan for student reading proficiency; and (iv) the correlation between third grade students reading on grade level and results of third grade language arts scores on a criterion-referenced test or computer adaptive test. This report has been submitted annually since 2013.

EXECUTIVE SUMMARY

The K-3 Reading Improvement Program provides instructional resources and supports for students in grades K-3 to support reading proficiency. A significant support provided by this program includes early reading intervention for students who demonstrate risk for not achieving reading competency. For example, students who do not meet reading competency standards on their first reading test and receive a reading intervention are seven times more likely to meet reading competency standards on their last reading test than if the student had not received a reading intervention. Overall, reading competency rates improved across the 2016-2017 school year. Specifically, improvement was noted in kindergarten, first, and third grade. At the beginning of the 2016-2017 school year, the percent of students who met grade-level based reading competency standards were 61 percent of kindergartners, 63 percent of first graders, 73 percent of second graders, and 71 percent of third graders. By the end of SY 2017, the overall percent of students who met grade-level based reading competency standards were 70 percent of kindergartners, 68 percent of first graders, 72 percent of 2nd graders, and 73 percent of third graders.

BACKGROUND

The K-3 Reading Improvement Program focuses on the early development of literacy skills in all students, with additional emphasis on the prevention of reading difficulties and early intervention for students who are at risk of not meeting grade-based reading competency standards. Resources available to aid students include

- early intervention,
- standards and assessments for testing and monitoring reading competency,
- optional progress monitoring assessment,
- ongoing professional development,
- coaching, and
- the use of data to inform instruction.

METHODOLOGY

Beginning in school year (SY) 2013, local education agencies (LEAs), school districts and charter schools, were required to assess and report to the state, students' reading competency three times a year (beginning, middle, and end) using the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessment. LEAs administered the DIBELS assessment and reported whether each student met reading competency standards at the time of the testing period and whether the student had received reading interventions at any time during the school year. Beginning in SY 2016, LEAs were additionally required to report composite scores for each testing period. The results of that assessment are reported here.

Following the 2016-2017 school year, the Utah State Board of Education (USBE) data and statistics personnel analyzed the short- and long-term effects of the K-3 Reading Improvement Program. Reading competency test data for 143,286 students who were enrolled in school for the full academic year (FAY), the equivalent of 160 days or more, were included in the analysis. Several analyses of the data were run to understand the impact of the program on student outcomes. The findings of these analyses are presented in The Effect of Reading Interventions section of this report.

FINDINGS

Student Reading Competency, 2016-2017 School Year

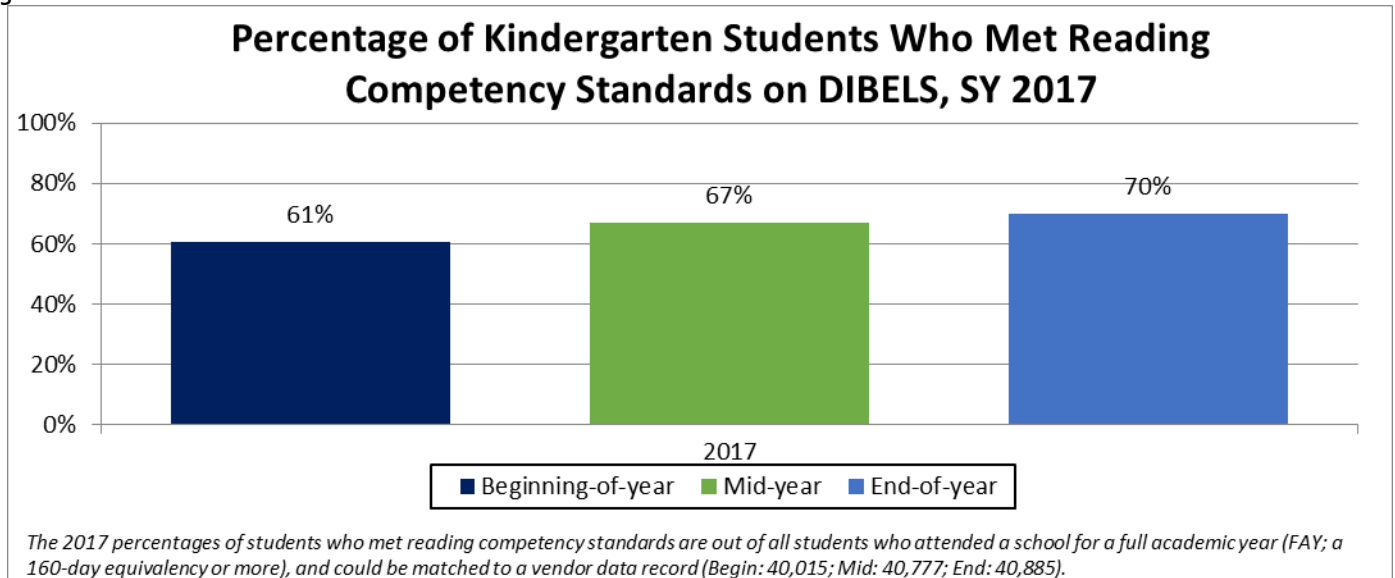
The Utah State Board of Education uses the DIBELS assessment to determine student reading competency over the course of the school year.

Kindergarten Competency

In the 2016-2017 school year, Utah did not have a standard statewide kindergarten assessment. The DIBELS assessment was used to determine reading competency because this assessment is the most widely used kindergarten assessment across the state. The data used here include 91 percent of Utah kindergarten students. Figure 1 shows the percent of kindergarten students who met competency for the beginning, middle, and end of SY 2017. Sixty-one

percent of kindergarten students met reading competency standards at the beginning of the year and by the end of kindergarten, 70 percent of students met reading competency standards.

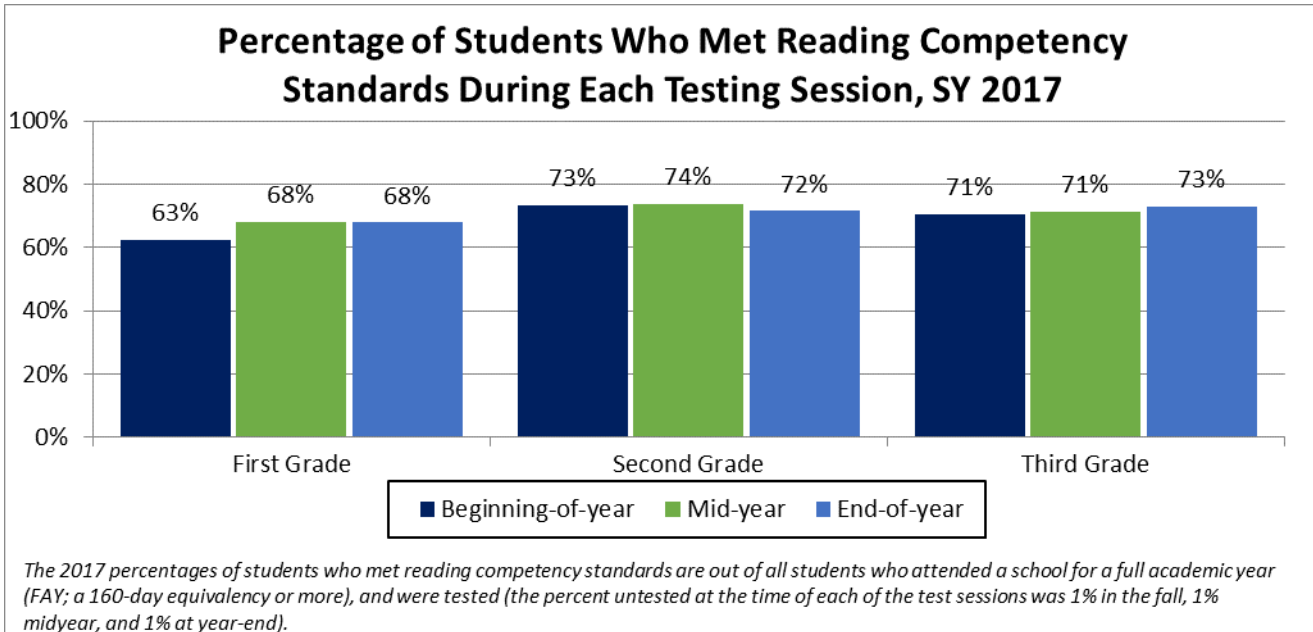
Figure 1.



First through Third Grade Competency

Figure 2 illustrates reading competency results by grade level for each of the three testing sessions throughout the year. The percent of students who met reading competency standards for their grade level at the beginning-of-year assessment was 63 percent of first graders, 73 percent of second graders, and 71 percent of third graders. For first and third grade students, the percent of students who met reading competency standards increased through the year with the largest gains for first grade students. Among first graders, the percent of students who met reading competency standards at the end-of-year assessment increased by five percentage points to 68 percent. Similarly, third grade students saw gains of two percentage points by the end-of-year assessment to 73 percent. The percent of second grade students who met reading competency standards declined across the school year by one percentage point to 72 percent.

Figure 2.



Overall Reading Competency over Time, Grades 1-3

Figure 3 shows year-end reading competency results for all students in grades one through three for SY 2013 through SY 2017. Figure 4 displays year-end reading competency results with students by subgroup for the same time period. Compared with the overall percentages of students meeting reading competency in grades one through three, lower percentages of students with risk factors (low income, minority, students with disabilities (SWD), students with mobility issues (mobile), and English language learners) met reading competency in grades one through three. In SY 2017, the largest gap was with SWD where only 40 percent of students with a disability met reading competency standards compared to 71 percent of students overall. All disaggregated groups saw decreases in the percent of students who met reading competency standards in SY 2017 as compared with SY 2015 and SY 2016.

Figure 3.

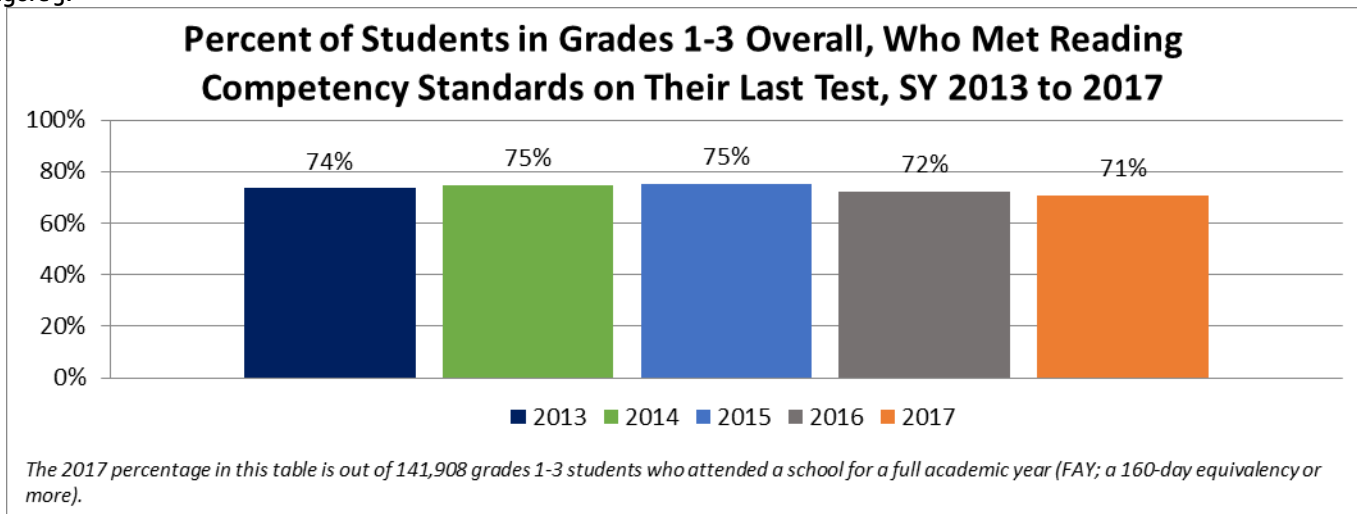
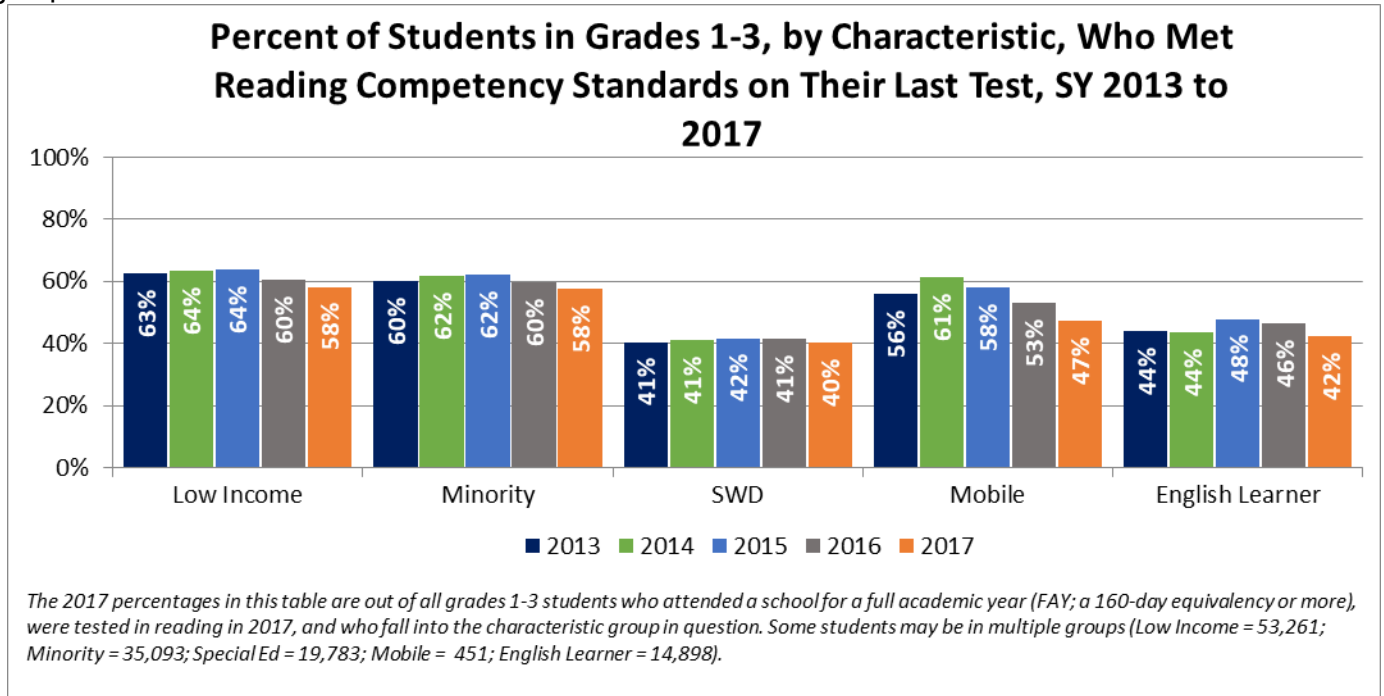


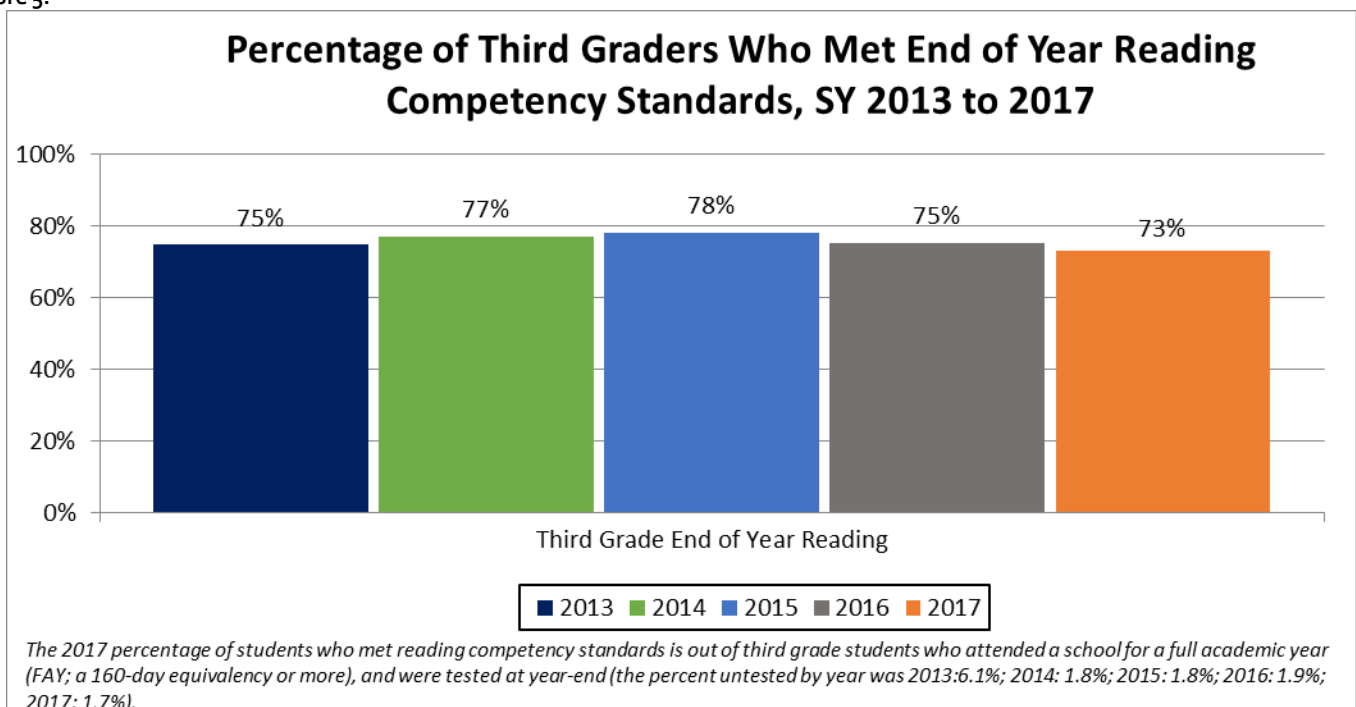
Figure 4.



Focus on Third Grade Reading Competency

For students in grade three, the percent of students achieving reading competency reached 73 percent in SY 2017, which is down from 75 percent in SY 2016 (see Figure 5). The percent of students in grade three who were untested has decreased substantially since SY 2013 from 6.1 percent to 1.7 percent in SY 2017.

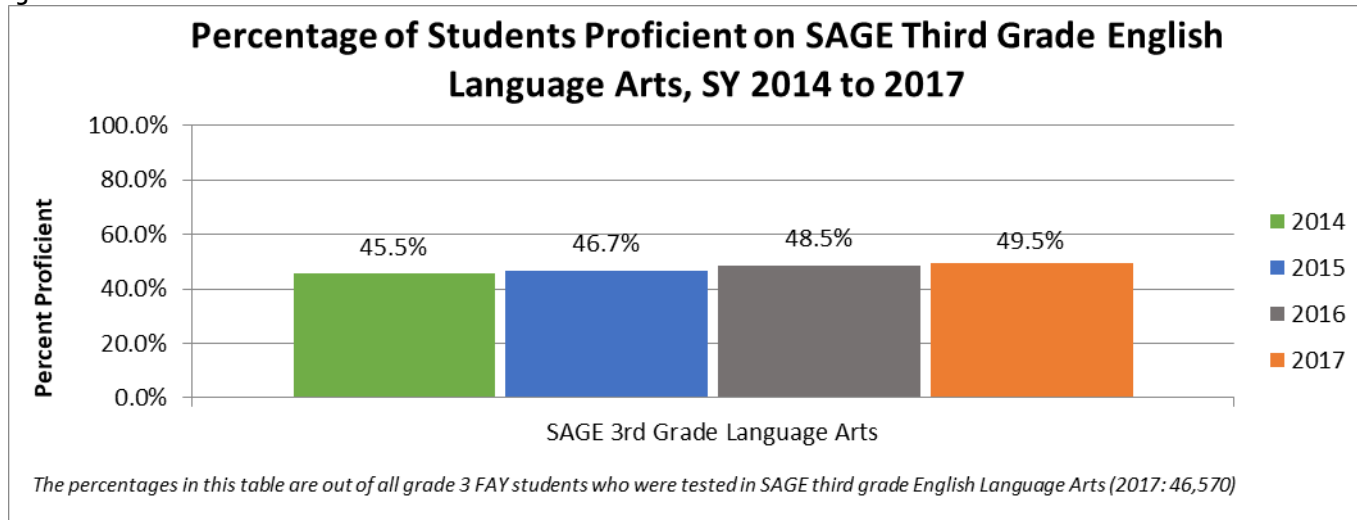
Figure 5.



Results of SAGE

From SY 2014 to 2017, there was a four percentage point gain in English Language Arts (ELA) proficiency in third grade as measured by the SAGE assessment. Figure 6 shows the percent of third grade students who met proficiency on the English Language Arts SAGE assessment for the previous three years.

Figure 6.



DIBELS-SAGE Correlation

School year 2014 marked the first year of Utah's SAGE summative assessment. The third grade ELA SAGE results have a moderate correlation to DIBELS benchmark status, suggesting that overall DIBELS and SAGE data are similar in their ability to indicate a student's reading performance. Prior to SY 2016, the USBE only collected indicator data from LEAs on whether a student met reading competency benchmarks. This yes or no measure was adequate for computing a statistically significant measure of how related the reading benchmark indicators are with SAGE third grade ELA scale scores. Table 1 shows the correlation coefficients for school years 2014 through 2017 between the SAGE scale scores and LEA indicator data. The correlation values are statistically significant, and show moderate correlations.

Table 1.

School Year	Enrollment	Correlation between SAGE scale score and reading benchmark indicator
2014	43,309	.561
2015	44,708	.570
2016	46,262	.581
2017	45,870	.593

The DIBELS composite scores were reported to the USBE for the first time in SY 2016. Examining the relationship between students' DIBELS composite scores and SAGE scale scores would produce more precise results. Table 2 illustrates the correlation coefficient for SY 2016 and 2017 using the DIBELS composite score data correlated with SAGE scale scores. The correlation coefficients suggest a stronger relationship between the two tests than what resulted from

the previous correlation analyses. This strong correlation suggests that students who achieve reading proficiency as measured by DIBELS are likely to be proficient on SAGE, but it is not a guarantee. One possible explanation for this is DIBELS assesses reading only; whereas, SAGE is more comprehensive as it also assesses writing (29 percent of a student's score).

Table 2.

School Year	Enrollment	Correlation between SAGE scale score and DIBELS composite score
2016	46,262	.736
2017	45,870	.741

Local Education Agency Student Reading Proficiency Progress

To evaluate the performance of LEAs, the Board analyzes each LEA's progress toward meeting state goals for reading growth and proficiency. This goal, the uniform growth goal (UGG), which is currently set at 47.83 percent, measures the percent of third grade students making typical or better growth when compared to other students in the nation with the same beginning-of-year reading competency score. Table 3 shows the percent of full academic year (FAY) students in each LEA, in grade 3, who made typical or better growth from beginning-of-year to end-of-year on the DIBELS assessment. Untested and excluded students are not included in the reading growth calculations. Overall, Utah third grade students are at 73 percent proficiency and 68.12 percent typical or better growth.

Table 3.

LEA	Grade 3 Proficiency Percentage	Grade 3 UGG (Growth) Percentage	UGG with 95% Confidence Interval	2017 UGG Met
Alpine District	77.2%	69.70%	70.88%	Yes
American International School of Utah	57.8%	40.48%	55.32%	Yes
American Leadership Academy	81.9%	75.00%	82.88%	Yes
American Preparatory Academy	83.5%	54.99%	60.05%	Yes
Aristotle Academy	≥80%	64.71%	87.42%	Yes
Ascent Academies of Utah	76.2%	63.02%	69.85%	Yes
Athenian eAcademy	40-49%	39.39%	56.07%	Yes
Athlos Academy of Utah	77.6%	74.78%	82.72%	Yes
Bear River Charter School	70-79%	100.00%	100.00%	Yes
Beaver District	81.5%	83.21%	89.61%	Yes
Box Elder District	75.4%	76.97%	79.75%	Yes
Cache District	88.4%	84.49%	86.48%	Yes
Canyon Grove Academy	69.2%	60.00%	73.58%	Yes
Canyon Rim Academy	93.2%	89.19%	96.26%	Yes
Canyons District	75.9%	63.92%	65.83%	Yes
Carbon District	62.2%	60.96%	66.99%	Yes
Channing Hall	85.9%	67.95%	78.31%	Yes
CS Lewis Academy	50-59%	54.84%	72.36%	Yes
Daggett District	≥80%	83.33%	104.42%	Yes
DaVinci Academy	59.7%	57.75%	69.24%	Yes
Davis District	77.4%	72.81%	74.00%	Yes
Dixie Montessori Academy	50.0%	66.67%	78.59%	Yes

LEA	Grade 3 Proficiency Percentage	Grade 3 UGG (Growth) Percentage	UGG with 95% Confidence Interval	2017 UGG Met
Dual Immersion Academy	50.9%	71.70%	83.83%	Yes
Duchesne District	69.2%	69.77%	74.29%	Yes
Early Light Academy at Daybreak	88.0%	82.00%	89.53%	Yes
Edith Bowen Laboratory School	84.0%	67.35%	80.48%	Yes
Emery District	68.8%	68.29%	75.41%	Yes
Endeavor Hall	67.8%	66.10%	78.18%	Yes
Entheos Academy	62.9%	57.14%	66.94%	Yes
Esperanza School	41.2%	56.72%	68.58%	Yes
Excelsior Academy	63.3%	45.57%	56.55%	Yes
Franklin Discovery Academy	70.4%	52.94%	66.64%	Yes
Freedom Preparatory Academy	76.3%	72.88%	80.90%	Yes
Garfield District	86.7%	62.30%	74.46%	Yes
Gateway Preparatory Academy	64.6%	56.25%	70.28%	Yes
George Washington Academy	77.5%	76.47%	84.09%	Yes
Good Foundations Academy	57.8%	57.81%	69.91%	Yes
Grand District	74.8%	74.26%	82.78%	Yes
Granite District	60.2%	59.16%	60.50%	Yes
GreenWood Charter School	51.2%	44.19%	59.03%	Yes
Guadalupe School	60-69%	78.13%	92.45%	Yes
Hawthorn Academy	72.5%	69.03%	76.31%	Yes
Highmark Charter School	86.0%	72.00%	84.45%	Yes
Iron District	73.5%	70.89%	74.28%	Yes
Jefferson Academy	92.5%	77.42%	85.92%	Yes
John Hancock Charter School	≥90%	76.19%	94.41%	Yes
Jordan District	74.9%	67.66%	69.14%	Yes
Juab District	66.0%	66.50%	73.04%	Yes
Kane District	82.4%	87.91%	94.61%	Yes
Lakeview Academy	83.2%	86.73%	93.45%	Yes
Leadership Learning Academy	72.0%	61.33%	72.35%	Yes
Legacy Preparatory Academy	86.2%	73.15%	81.51%	Yes
Lincoln Academy	92.1%	84.93%	93.14%	Yes
Logan City District	70.2%	72.12%	76.34%	Yes
Lumen Scholar Institute	50-59%	60.00%	76.23%	Yes
Mana Academy Charter School	50-59%	47.22%	63.53%	Yes
Maria Montessori Academy	70.0%	54.29%	65.96%	Yes
Millard District	73.1%	88.29%	92.52%	Yes
Moab Charter School	50-59%	23.53%	43.69%	No
Monticello Academy	86.8%	92.11%	98.17%	Yes
Morgan District	84.2%	77.58%	83.05%	Yes
Mountain West Montessori Academy	83.0%	52.83%	66.27%	Yes
Mountainville Academy	90.3%	80.65%	88.67%	Yes
Murray District	75.8%	64.94%	69.29%	Yes
Navigator Pointe Academy	85.2%	73.58%	85.45%	Yes
Nebo District	70.6%	69.08%	70.91%	Yes
Noah Webster Academy	74.0%	62.67%	73.61%	Yes
North Davis Preparatory Academy	71.2%	55.77%	65.31%	Yes
North Sanpete District	75.0%	80.23%	86.09%	Yes
North Star Academy	86.0%	86.00%	95.62%	Yes

LEA	Grade 3 Proficiency Percentage	Grade 3 UGG (Growth) Percentage	UGG with 95% Confidence Interval	2017 UGG Met
North Summit District	87.3%	71.83%	82.29%	Yes
Odyssey Charter School	74.2%	57.58%	69.50%	Yes
Ogden City District	58.1%	67.17%	70.20%	Yes
Ogden Preparatory Academy	80.2%	87.13%	93.66%	Yes
Open Classroom	64.0%	41.18%	54.68%	Yes
Pacific Heritage Academy	30-39%	48.65%	64.75%	Yes
Park City District	77.9%	68.63%	73.83%	Yes
Pinnacle Canyon Academy	50-59%	58.82%	75.37%	Yes
Piute District	70-79%	60.00%	81.47%	Yes
Promontory School of Expeditionary Learning	82.6%	67.39%	80.94%	Yes
Providence Hall	73.9%	74.17%	82.00%	Yes
Provo District	72.8%	66.67%	69.40%	Yes
Quest Academy	66.1%	50.43%	59.49%	Yes
Ranches Academy	93.9%	65.31%	78.63%	Yes
Reagan Academy	≥95%	66.67%	78.04%	Yes
Renaissance Academy	86.7%	53.01%	63.75%	Yes
Rich District	70-79%	76.92%	93.12%	Yes
Salt Lake District	65.9%	60.09%	62.40%	Yes
San Juan District	55.7%	67.96%	74.75%	Yes
Scholar Academy	81.1%	82.19%	90.97%	Yes
Sevier District	73.5%	71.66%	76.70%	Yes
Soldier Hollow Charter School	60-69%	82.35%	95.17%	Yes
South Sanpete District	77.9%	82.06%	87.10%	Yes
South Summit District	70.7%	66.38%	74.98%	Yes
Spectrum Academy	45.6%	69.09%	81.30%	Yes
Summit Academy	79.8%	70.57%	76.05%	Yes
Syracuse Arts Academy	80.1%	61.88%	68.95%	Yes
Terra Academy	82.6%	82.61%	93.56%	Yes
Thomas Edison	68.6%	63.97%	72.04%	Yes
Timpanogos Academy	70.0%	49.28%	61.07%	Yes
Tintic District	70-79%	66.67%	93.34%	Yes
Tooele District	71.5%	77.19%	79.72%	Yes
Utah Connections Academy	50-59%	47.62%	68.98%	Yes
Utah Virtual Academy	59.7%	51.52%	63.57%	Yes
Valley Academy	80-89%	58.06%	75.44%	Yes
Venture Academy	≥95%	90.00%	99.30%	Yes
Vista at Entrada School of Performing Arts and Technology	55.3%	35.29%	45.45%	No
Voyage Academy	77.9%	63.64%	74.38%	Yes
Walden School of Liberal Arts	60-69%	75.76%	90.38%	Yes
Wallace Stegner Academy	58.5%	48.00%	61.85%	Yes
Wasatch District	69.5%	58.32%	62.64%	Yes
Wasatch Peak Academy	85.3%	68.92%	79.46%	Yes
Wasatch Waldorf Charter School	67.1%	47.22%	58.75%	Yes
Washington District	71.9%	67.02%	69.00%	Yes
Wayne District	70-79%	80.56%	93.48%	Yes
Weber District	76.1%	69.75%	71.59%	Yes
Weilenmann School of Discovery	89.4%	83.08%	92.19%	Yes

Per Board waiver, Uintah School District remains on the old UGG calculation, beginning with a 2013 baseline, an annual UGG goal is created based on proficiency rather than growth (Table 4).

Table 4.

LEA	2013 Baseline	Goal 2017	Grade 3 UGG (Proficiency) Percentage	UGG with 95% Confidence Interval	2017 UGG Met
Uintah District	65.4%	75.3%	73.40%	77.10%	Yes

The Effect of Reading Interventions

In this report, the information presented above provides a good description of student learning gains in reading for the past school year and the five-year trend, the progress of schools in meeting student reading goals, and the correlation between third grade students reading on grade level and the results of third grade language arts SAGE scores. What the information above cannot tell us is what factors affect the likelihood of a student meeting reading competency standards at year end.

To this end, the USBE data and statistics personnel analyzed the short- and long-term effects of the K-3 Reading Improvement Program using reading competency test data from the 2016-2017 school year. The sample was composed of 143,286 students who were enrolled in school for the full academic year, the equivalent of 160 days or more.

The outcome that was analyzed was whether students reached reading competency by the end of the year. The indicators predicted to impact whether a student was reading competent at year end include relevant demographics and several educational inputs. Specifically, the measures are whether a student met reading competency standards at the time of the first test, whether the student received a reading intervention, whether the student is chronically absent, and whether the student meets any of the following characteristics: is a student with disabilities, an English language learner, a racial or ethnic minority, or low income. To analyze whether or not a student met reading competency standards at year end, an analysis was conducted of students for the 2016-2017 school year using logistic regression.

Table 5 on the following page presents the impact of the indicators, in odds ratios, on whether a student was reading competent at year end. The odds ratios tell us the odds of a student being reading competent at year end holding all other factors constant. An odds ratio of 1.0 indicates that the odds of an event occurring are even (50-50). An odds ratio of 2.0 would mean an event was twice, or two times, as likely, and an odds ratio of 0.5 would mean an outcome was half as likely to occur. While all of the indicators are statistically significant which is expected due to the large sample size, only one factor is predicted to increase the odds of meeting reading competency standards at year end. This indicator is an interaction term between whether a student met reading competency standards at the time of the first test and whether the student received a reading intervention.

In other words, the odds ratio for the interaction term (7.192) tells us that, holding all else constant, students who were not reading competent at the time of the first test, but received a reading intervention were about seven times as likely to be reading competent at year end compared to students who were not reading competent at the time of the first test and did not receive a reading intervention.

These results demonstrate that interventions provided to students who are not reading competent are critical in getting them to reading competency. With these interventions, the students who are not competent in reading at the beginning of the year are more likely to reach the reading competency benchmark by the end of the school year

Table 5.

Factors Predicted to Increase the Odds of Meeting Reading Competency Standards	Odds Ratio
Interaction effect of two factors: Did not meet reading competency standards at the time of the first test, and one or more reading intervention was provided	7.192
Factors Predicted to Decrease the Odds of Meeting Reading Competency Standards	
Did Not Meet Reading Competency Standards at the Time of The First Test Taken (N = 1/Y = 0)	0.031
Reading Intervention Received (N=0/Y=1)	0.070
Student with Disabilities (N = 0/Y = 1)	0.385
English Learner (N = 0/Y = 1)	0.633
Chronically Absent (N = 0/Y = 1)	0.707
Low Income (N = 0/Y = 1)	0.811
Minority Race/Ethnicity (N = 0/Y = 1)	0.910
Constant: the odds of meeting reading competency standards	37.572

Among students who received a reading intervention and were tested in reading at least twice during SY 2017, there was a five percentage point increase overall (from 35% to 40%), from the students’ first to last test, in the percent of students who met reading competency standards (see figure 7).

Figure 7.

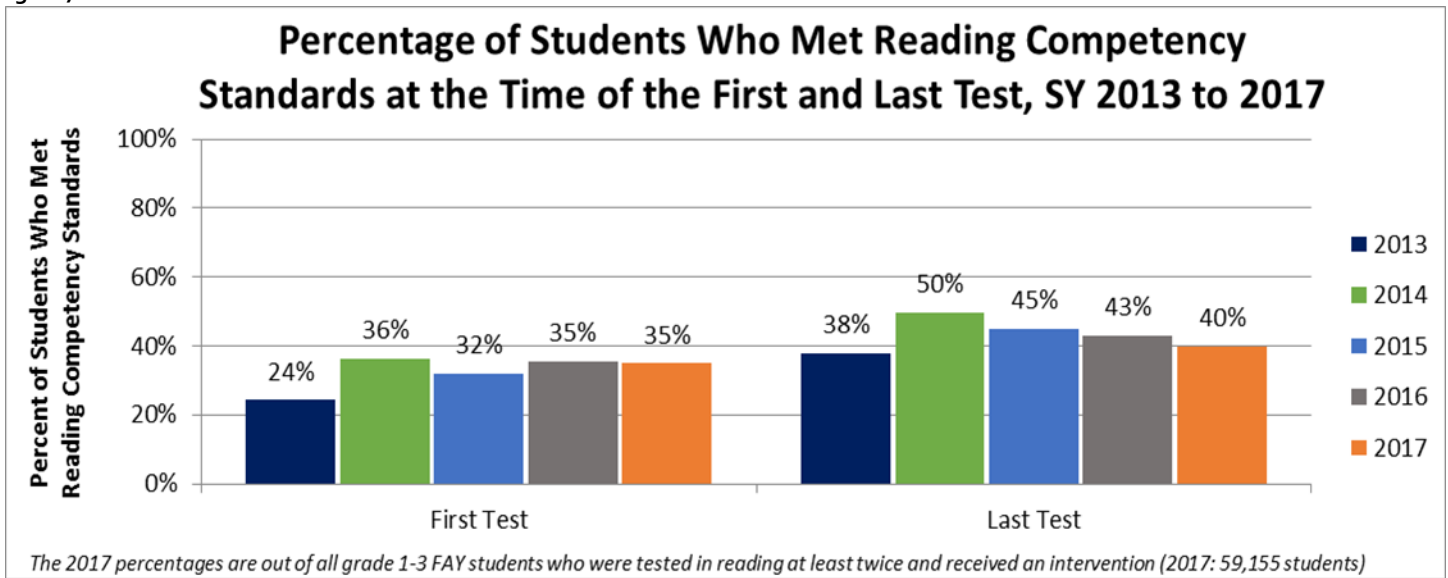
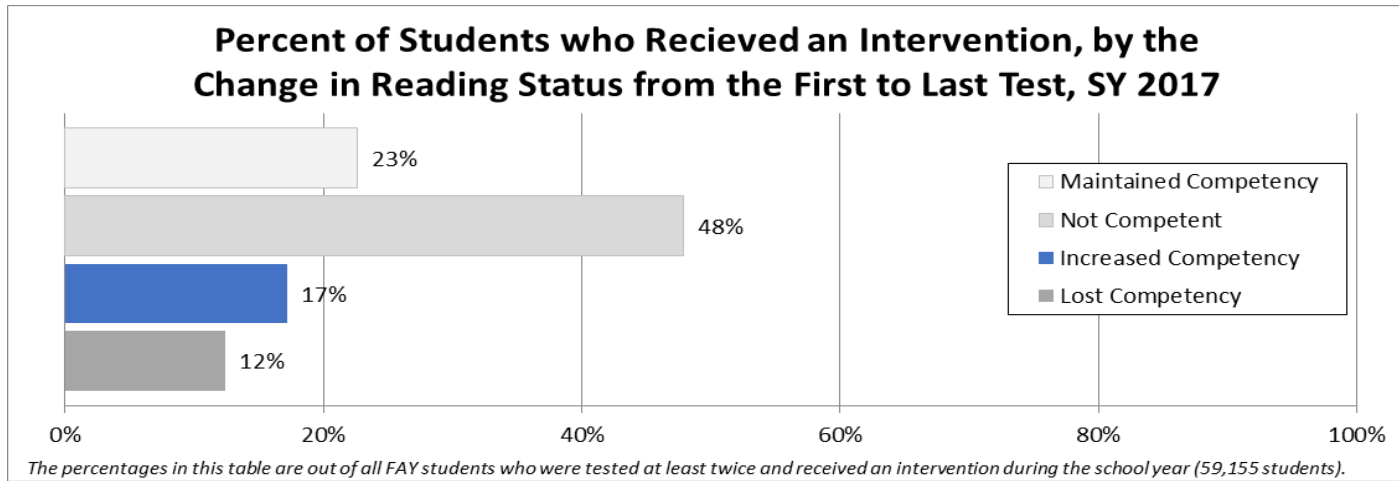


Figure 8 shows the change in reading competency status among all students who received a reading intervention and were tested in reading at least twice. A plurality of the students who received a reading intervention did not meet reading competency standards at the time of both their first or last tests (48 percent). Seventeen percent of the students who were provided with a reading intervention showed gains in reading competency from the time of their first test to the time of their last test (i.e. changed their reading competency status from “no” to “yes”).

Figure 8.



Financial Expenditure Summary for the K-3 Reading Improvement Program

Each LEA submits an annual report to USBE accounting for the expenditure of the K-3 Improvement Program funds in accordance with their Reading Achievement Plan. Utah Code Annotated 53A-17a-150 states that legislative funds may be used to improve reading competency, including:

- Reading specialists/coaches
- Focused interventions/tutoring
- Before/after school programs
- Intervention software
- Professional development for K-3 teachers

Districts are required to match K-3 Reading Improvement funds with locally raised dollars from levies or other sources. Charter schools are not required to match funds. In SY 2017, 94% of K-3 legislated funds were spent on salaries of licensed teachers, reading specialists, coaches, and paraprofessionals who work daily to improve core instruction and provide interventions for K-3 students Table 6 shows, by object code, the expenditures of K-3 Reading Improvement funds for FY 2017.

Table 6.

100 Salaries: Licensed & Non-Licensed Personnel	200 Employee Benefits: Licensed & Non-Licensed Personnel	300 Professional and Technical Services	400 Purchased Property Services	500 Other Purchased Services	600 Supplies and Materials	730 Equipment	860/870 Indirect Cost	800 Other	Total
\$10,770,592	\$3,249,740	\$158,660	\$62,000	\$7,500	\$459,681	\$36,729	\$254,063	\$1,033	\$15,000,000
72%	22%	1%	<1%	<1%	3%	<1%	<2%	<1%	100%
94%		6%							100%

ADA Compliant 01/16/2018