Idaho K-3 Reading Achievement vs. The COVID Pandemic (2019 vs. 2021)

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This descriptive study examined the impact of federal, state, and local mandates regarding schools during the COVID-19 pandemic on student reading skills in grades K-3 as measured by the Idaho Reading Indicator (IRI) between the spring tests scores in 2019 (before pandemic) and 2021 (not yet out of pandemic).

Two methods were employed to organize, analyze, and describe changes in student reading performance from 2019 to 2021. First, the Cohen d was used to estimate an "effect size" for each student group, which indicated the magnitude of change in overall group performance between the spring 2019 and spring 2021 assessments. Effect size was a measure of practical significance regarding the magnitude of change.

Second, five percentiles from each student group for 2019 and 2021 were selected to represent the group's high, high average, average for grade level, low average, and low performing students. Percentile changes (or lack thereof) from 2019 to 2021 were examined.

The Idaho State Department of Education graciously provided the IRI statewide summary scores from 2019 and 2021 utilized in the study. Data were provided for five student groups (all students, female students, male students, Hispanic students, and White students in kindergarten through grade 3. These five student groups over four grade levels made up twenty opportunities for analysis. For each student group, the Department provided the number of students who had valid IRI scale scores, the average or mean scale score, and the standard deviation of the mean. These data are displayed in Table 1.

This study neither requested nor examined IRI "percent proficient and above" results because their interpretation was problematic. Ho (2007) found that their properties as trend statistics rendered them ill-suited for trend comparisons. and that for trend analyses, averages and average-based statistics should be the default consideration. The National Academies of Sciences, Engineering, and Medicine (2017) concluded that "news reports often focus not only on how students are doing at a particular time, but the extent to which the percentage of students scoring Proficient or above has (or has not) improved over successive NAEP years. When these comparisons are based on the scale scores, they provide useful information. When they are based on the "percentage Proficient or above" metric and used to compare progress across groups, they can be misleading" (p. 208).

Table 1. The Idaho State Department of Education provided the Idaho Reading Indicator (IRI) group test scores and demographic data from 2019 and 2021 for the five student groups examined in this study.

All Students, 2019

grade	n	mean	stddev
K	21,339	204.9748	14.6246
1	22,179	224.3637	16.5658
2	22,485	241.7331	18.9448
3	22,758	254.2768	21.1080

All Students, 2021

grade	n	mean	stddev
K	21,042	204.7846	15.9460
1	21,940	222.2679	17.7868
2	22,296	240.0316	20.7972
3	22,252	253.8807	22.6886

Female Students, 2019

grade	n	mean	stddev
K	10,454	205.6797	14.0477
1	10,809	224.6786	15.7942
2	11,062	242.5015	18.4654
3	11,162	255.3510	20.2820

Female Students, 2021

grade	n	mean	stddev
K	10,295	205.3198	15.3576
1	10,697	222.5278	17.0230
2	10,999	240.8505	20.0919
3	10,887	254.6319	21.6891

Male Students, 2019

grade	n	mean	stddev
K	10,885	204.2979	15.1278
1	11,370	224.0644	17.2628
2	11,423	240.9890	19.3694
3	11,596	253.2427	21.8247

Male Students, 2021

grade	n	mean	stddev
K	10,747	204.2720	16.4744
1	11,243	222.0206	18.4816
2	11,297	239.2343	21.4324
3	11,365	253.1610	23.5850

Hispanic Students, 2019

grade	n	mean	stddev
K	3,823	198.1285	14.6061
1	4,017	217.5307	16.4975
2	4,190	234.8776	18.7381
3	4,246	246.3832	20.5106

Hispanic Students, 2021

grade	n	mean	stddev
K	4,191	198.4221	16.3855
1	4,245	215.9969	17.7193
2	4,123	232.6052	19.8934
3	4,167	245.7384	22.0907

White Students, 2019

grade	n	mean	stddev
K	16,117	206.8914	14.0210
1	16,683	226.1357	15.9583
2	16,763	243.6950	18.3533
3	17,030	256.3564	20.6184

White Students, 2021

grade	n	mean	stddev
K	15,411	206.6477	15.1131
1	16,236	223.9550	17.1877
2	16,624	242.0019	20.3869
3	16,590	255.9915	22.0898

n = the number of students in the group with valid IRI scores
mean = the average score for the group
stddev = the standard deviation of the mean for the group

The pandemic seems to have reduced the number of Idaho students enrolled across the K-12 grades. The decline in the number of students with valid **IRI** scores seems to trend with the statewide enrollment numbers.

Table 2. The change in the number of students with valid Idaho Reading Indicator (IRI) scores between 2019 and 2021, five student groups, grades K-3

IRI Participation Change from 2019 to 2021
Five Student Groups, Grades K-3

Grade	All	Female	Male	Hispanic	White
Kindergarten	-1.39%	-1.52%	-1.39%	9.63%	-1.39%
Grade 1	-1.08%	-1.04%	-1.12%	5.68%	-2.68%
Grade 2	-0.84%	-0.57%	-1.10%	-1.60%	-0.83%
Grade 3	-2.22%	-2.46%	-1.99%	-1.86%	-2.58%

Narratives:

Of the 20 student groups (i.e., demographic x grade), only Hispanic kindergartners and Hispanic first graders had higher participation numbers in the IRI assessments in 2021 than in 2019.

Among the 20 student groups, the change in participation ranged from an increase of +9.63 percent for Hispanic kindergartners to a decrease of –2.68 percent for White first graders.

Cohen d Effect Size

The effect size represents the "practical significance" of the difference between two means, for this study it is the difference between a group's means from 2019 and 2021. It describes the combined performance of all the students in a group, whether the group is at the state, district, school, or classroom level.

The effect size (i.e., the *magnitude of the difference between two means*) is calculated by dividing the difference between two means by their pooled standard deviation. This study used the Cohen d formula, which examines the mean, standard deviation, and number of students in 2019 and 2021 to estimate whether a group experienced a gain ($d > 0$), no change ($d = 0$), or a loss ($d < 0$) in reading knowledge and skills that the **IRI** measures. The computational formula and it estimates are:

The Cohen d is defined as the difference between two means divided by a standard deviation for the data, or

$$d = \frac{\bar{x}_2 - \bar{x}_1}{s}$$

Jacob Cohen defined s (the pooled standard deviation) as

$$s = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

Table 3. Cohen d effect size estimates from the spring Idaho Reading Indicator (IRI) assessments of 2019 and 2021, five student groups (All Students, Females, Males, Hispanics, and Whites), grades K-3.

IRI Reading "Cohen d" Effect Sizes, 2019 to 2021
Five Student Groups, Grades K-3

Grade	All	Female	Male	Hispanic	White
Kindergarten	-0.012	-0.024	-0.002	0.019	-0.017
Grade 1	-0.122	-0.131	-0.114	-0.090	-0.132
Grade 2	-0.086	-0.086	-0.086	-0.118	-0.087
Grade 3	-0.018	-0.034	-0.004	-0.030	-0.017

Narrative:

Of the 20 data points (i.e., demographic x grade), only the Hispanic kindergartners exhibited a gain in reading achievement from 2019 to 2021.

Two sets of bar graphs exhibiting the magnitude of achievement gains or losses from the spring IRI 2019 to spring IRI 2021 (i.e., the reading effect sizes).

Grade Level Graphs (yellow bars). The first set consists of four graphs, one for each grade level with the five student groups displayed side by side.

✓ Figure 1. Kindergarten effect sizes for all students, females, males, Hispanics, and Whites.

✓ Figure 2. First grade effect sizes for all students, females, males, Hispanics, and Whites.

✓ Figure 3. Second grade effect sizes for all students, females, males, Hispanics, and Whites

✓ Figure 4. Third grade effect sizes for all students, females, males, Hispanics, and Whites

Student Group Graphs (blue bars). The second set of graphs exhibiting effect size results consists of five graphs, one for each student group with the four grade levels displayed side by side.

✓ Figure 5. All student effect sizes for kindergarten and grades 1-3.

✓ Figure 6. Female student effect sizes for kindergarten and grades 1-3

✓ Figure 7. Male student effect sizes for kindergarten and grades 1-3

✓ Figure 8. Hispanic student effect sizes for kindergarten and grades 1-3

✓ Figure 9. White student effect sizes for kindergarten and grades 1-3

Note: A common scale was used for all effect size graphs so that the plotted "bars" would be visually comparable from graph to graph.

Idaho Effect Size by Group for Grade K Reading (IRI), Spring 2019 vs 2021

All	Female	Male	Hispanic	White

-0.012 (All)
-0.024 (Female)
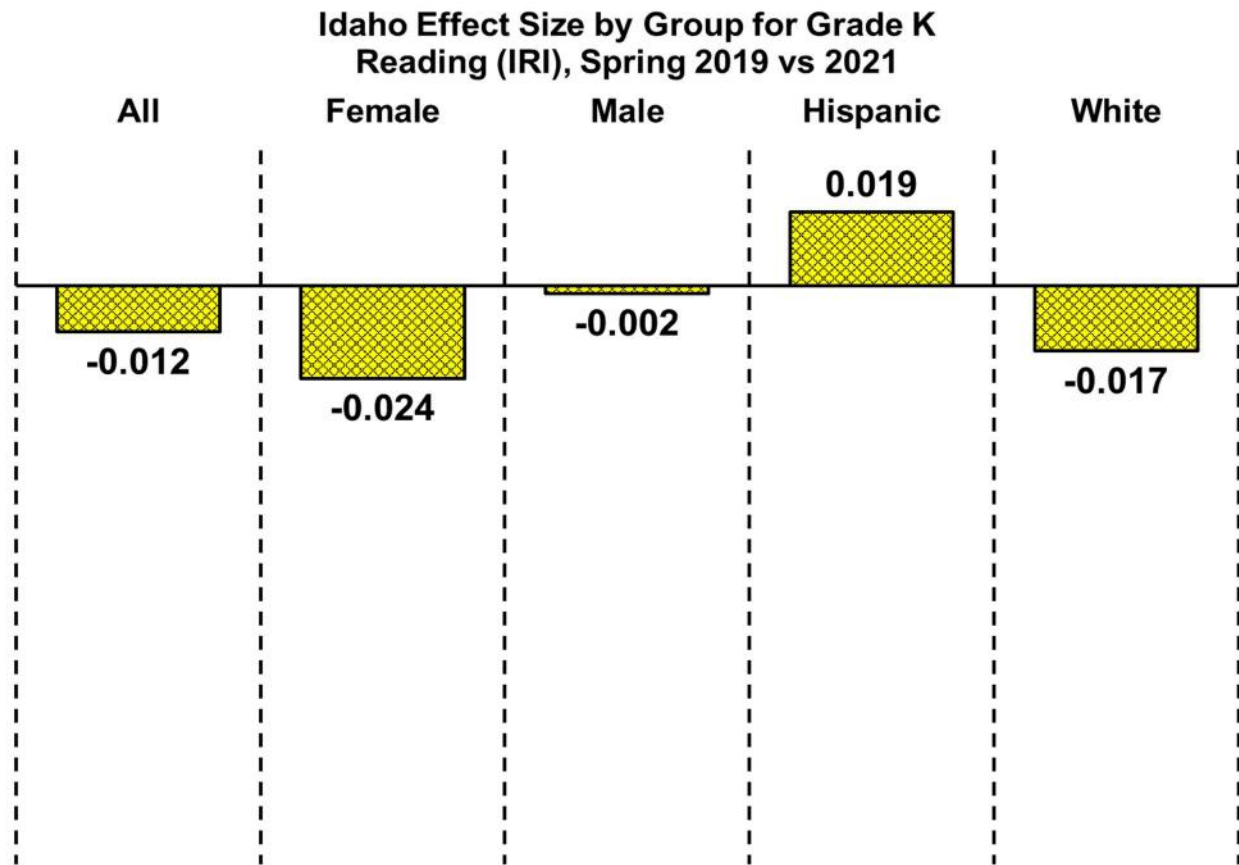-0.002 (Male)
0.019 (Hispanic)
-0.017 (White)

Figure 1. Idaho Cohen *d* effect size for the magnitude of change in the Idaho Reading Indicator (IRI) average scale scores from spring 2019 to spring 2021 for five groups, namely all students, female students, male students, Hispanic students, and White students in kindergarten.

Narratives:

During the pandemic (2019 to 2021), Hispanic Kindergarten students was the only data point with a gain in reading achievement. Each of the other four Kindergarten data points (all students, females, males, and Whites) lost ground in reading.

The Cohen *d* for Idaho's Hispanic Kindergarten data point was +0.019, a gain in reading performance.

The Cohen *d* from smallest to largest in kindergarten were males (-0.002), all students (-0.012), White students (-0.017), and females (0.024).
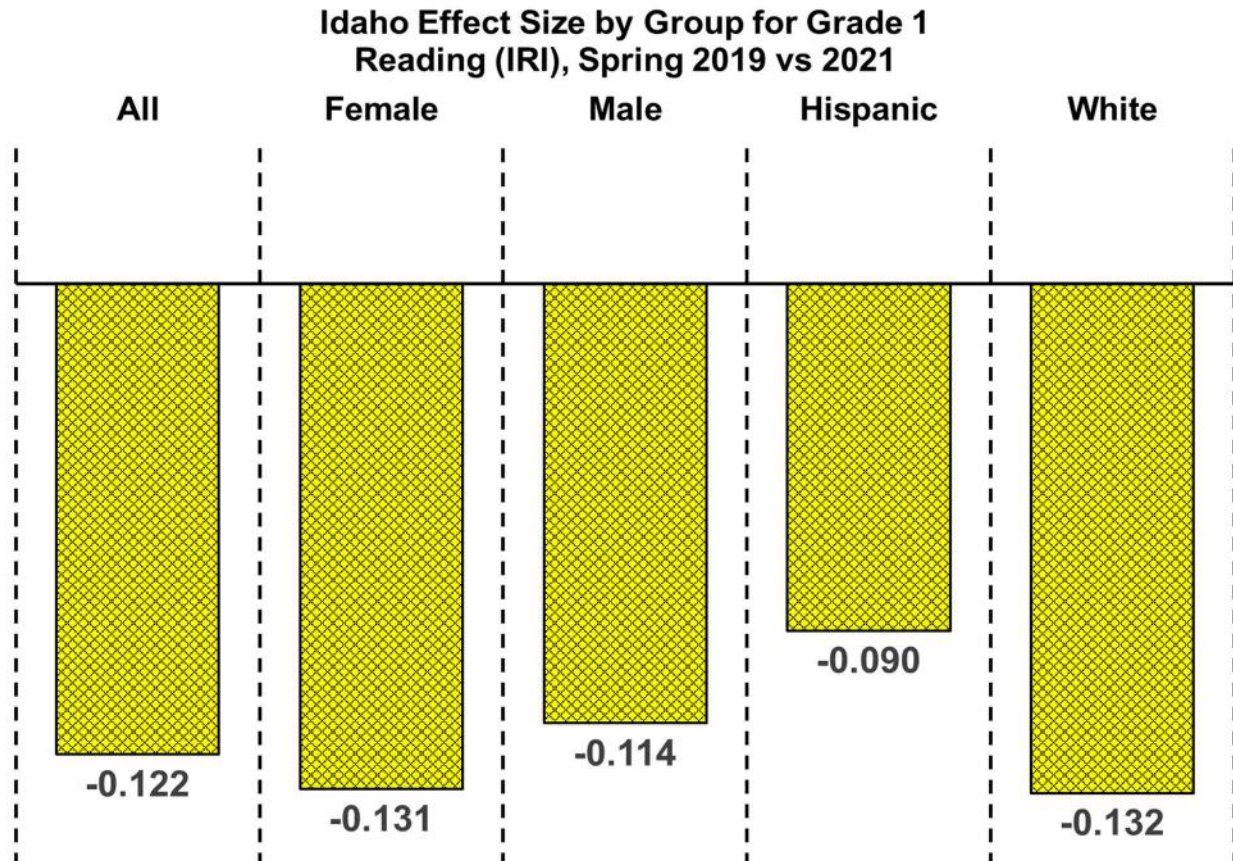
**Idaho Effect Size by Group for Grade 1
Reading (IRI), Spring 2019 vs 2021**

| All | Female | Male | Hispanic | White |

-0.122   -0.131   -0.114   -0.090   -0.132

Figure 2. Idaho Cohen *d* effect size for the magnitude of change in the Idaho Reading Indicator (IRI) average scale scores from spring 2019 to spring 2021 for five groups, namely all students, female students, male students, Hispanic students, and White students in Grade 1.

Narratives:

During the pandemic (2019 to 2021), the Cohen *d* of the Grade 1 IRI measures of reading for five data points (all, female, male, Hispanic and White) indicated a loss in reading performance for each data point.

During the pandemic (2019 to 2021), the Cohen *d* reading losses from smallest to largest in Grade 1 were Hispanic students (-0.090), males (-0.114), all students (-0.122), females (-0.131), and White students (-0.132).
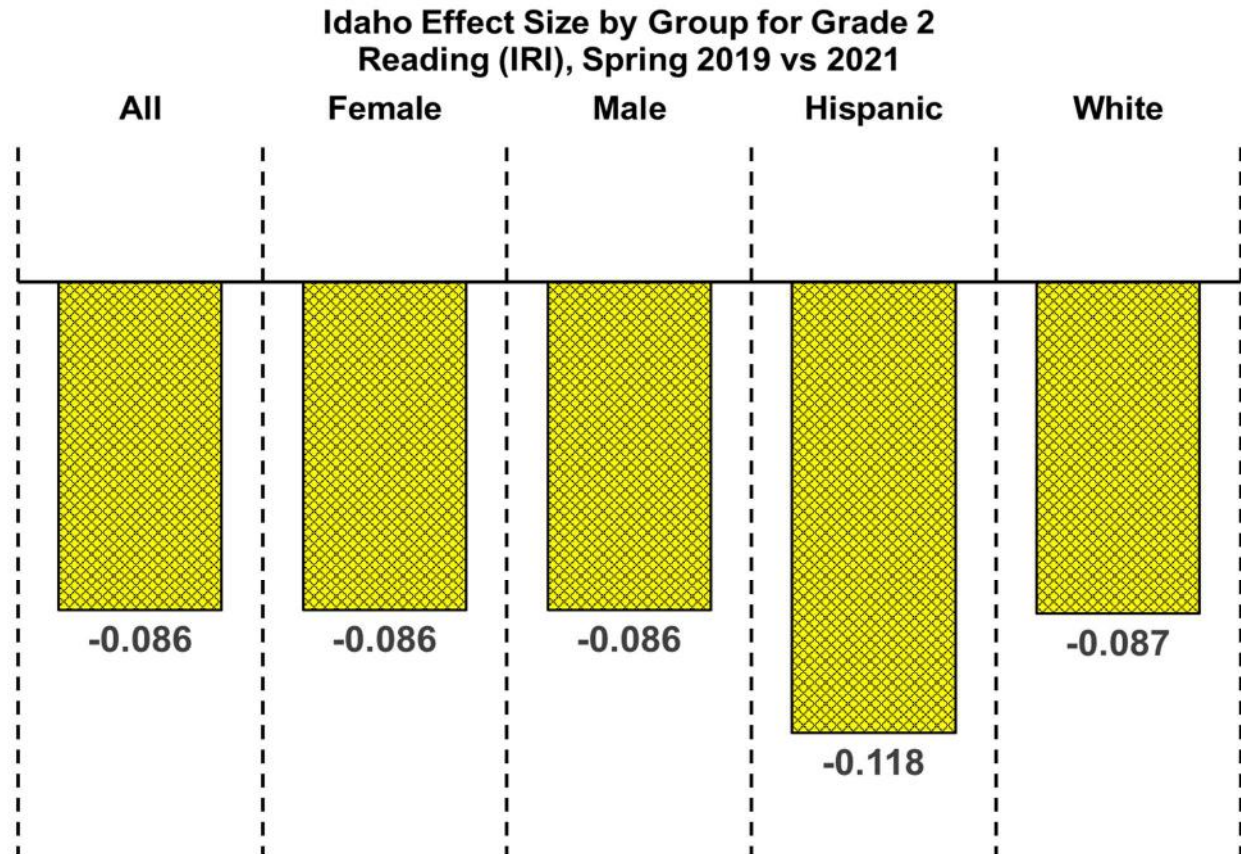
Idaho Effect Size by Group for Grade 2 Reading (IRI), Spring 2019 vs 2021

All	Female	Male	Hispanic	White
-0.086	-0.086	-0.086	-0.118	-0.087

Figure 3. Idaho Cohen *d* effect size for the magnitude of change in the Idaho Reading Indicator (IRI) average scale scores from spring 2019 to spring 2021 for five groups, namely all students, female students, male students, Hispanic students, and White students in Grade 2.

Narratives:

During the pandemic (2019 to 2021), the Cohen *d* of the Grade 2 IRI measures of reading for five data points (all, female, male, Hispanic and White) revealed a loss in reading performance for each group.

During the pandemic (2019 to 2021), the Cohen *d* reading losses from smallest to largest in Grade 2 were all, female and male were tied at -0.086, followed by White students (-0.087) and Hispanic students (-0.118).
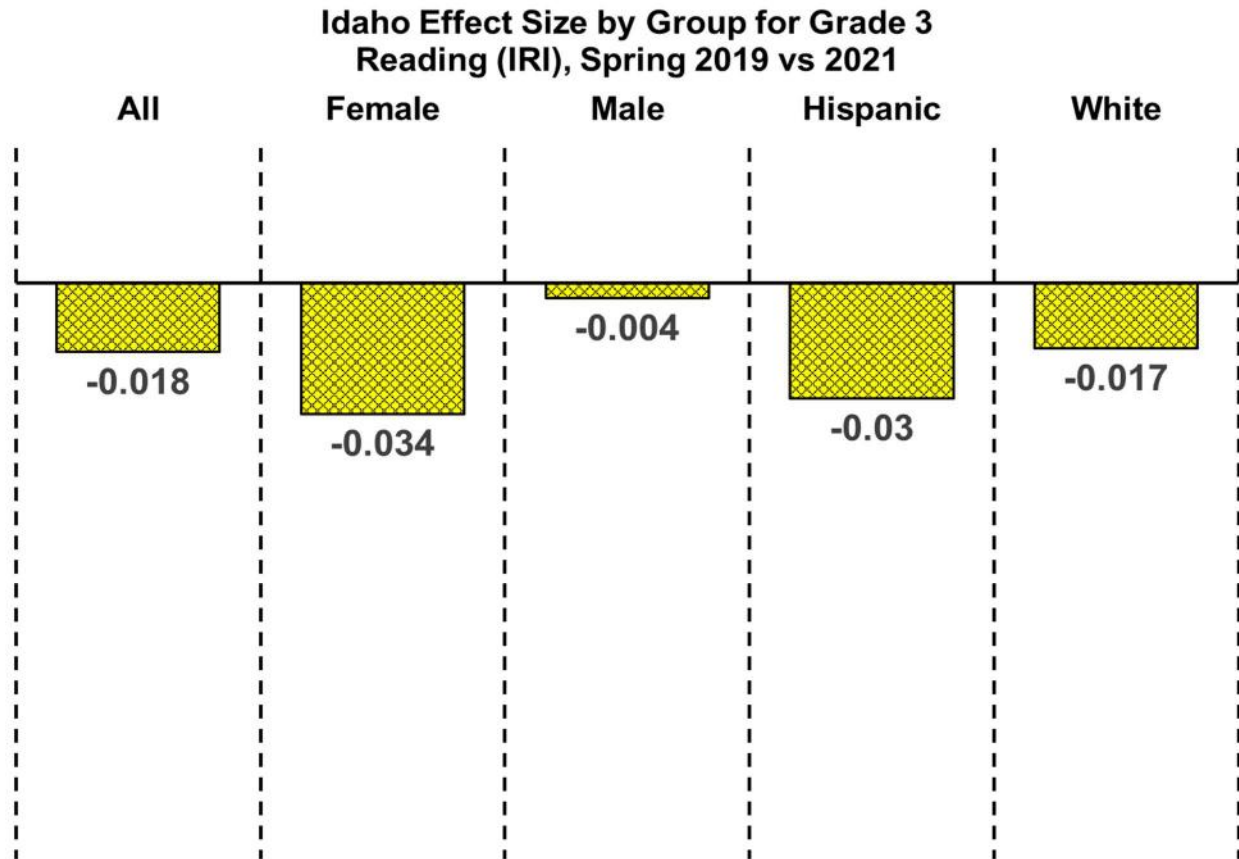
**Idaho Effect Size by Group for Grade 3
Reading (IRI), Spring 2019 vs 2021**

All	Female	Male	Hispanic	White

-0.018

-0.034

-0.004

-0.03

-0.017

Figure 4. Idaho Cohen *d* effect size for the magnitude of change in the Idaho Reading Indicator (IRI) average scale scores from spring 2019 to spring 2021 for five groups, namely all students, female students, male students, Hispanic students, and White students in Grade 3.

Narratives:

During the pandemic (2019 to 2021), the Cohen *d* of the Grade 3 IRI measures of reading for five data points (all, female, male, Hispanic and White) revealed a loss in reading performance for each group.

During the pandemic (2019 to 2021), the Cohen *d* reading losses from smallest to largest in Grade 3 were males (-0.004), White students (-0.017), all students (-0.018), Hispanic students (-0-030), and females (-0.034).

**Idaho Effect Size by Grade for All Students
Reading (IRI), Spring 2019 vs 2021**

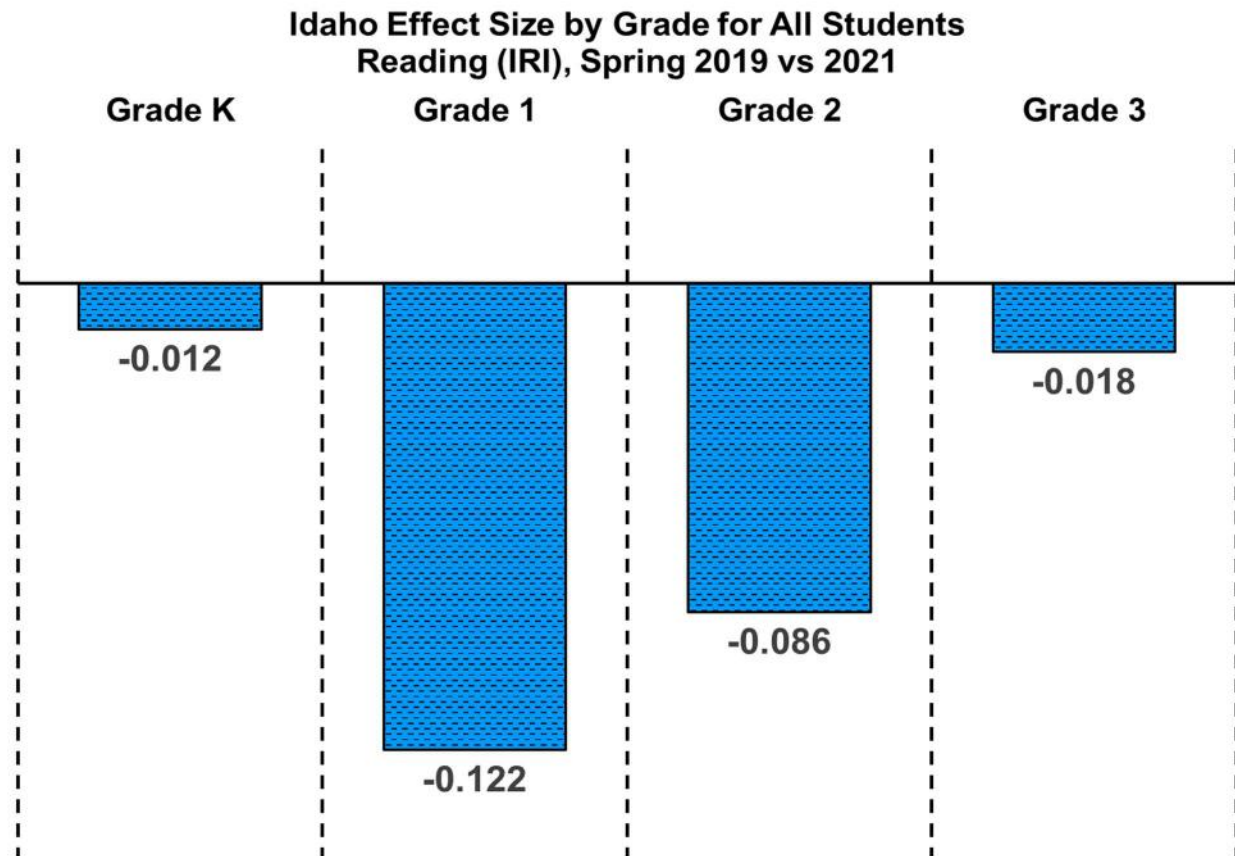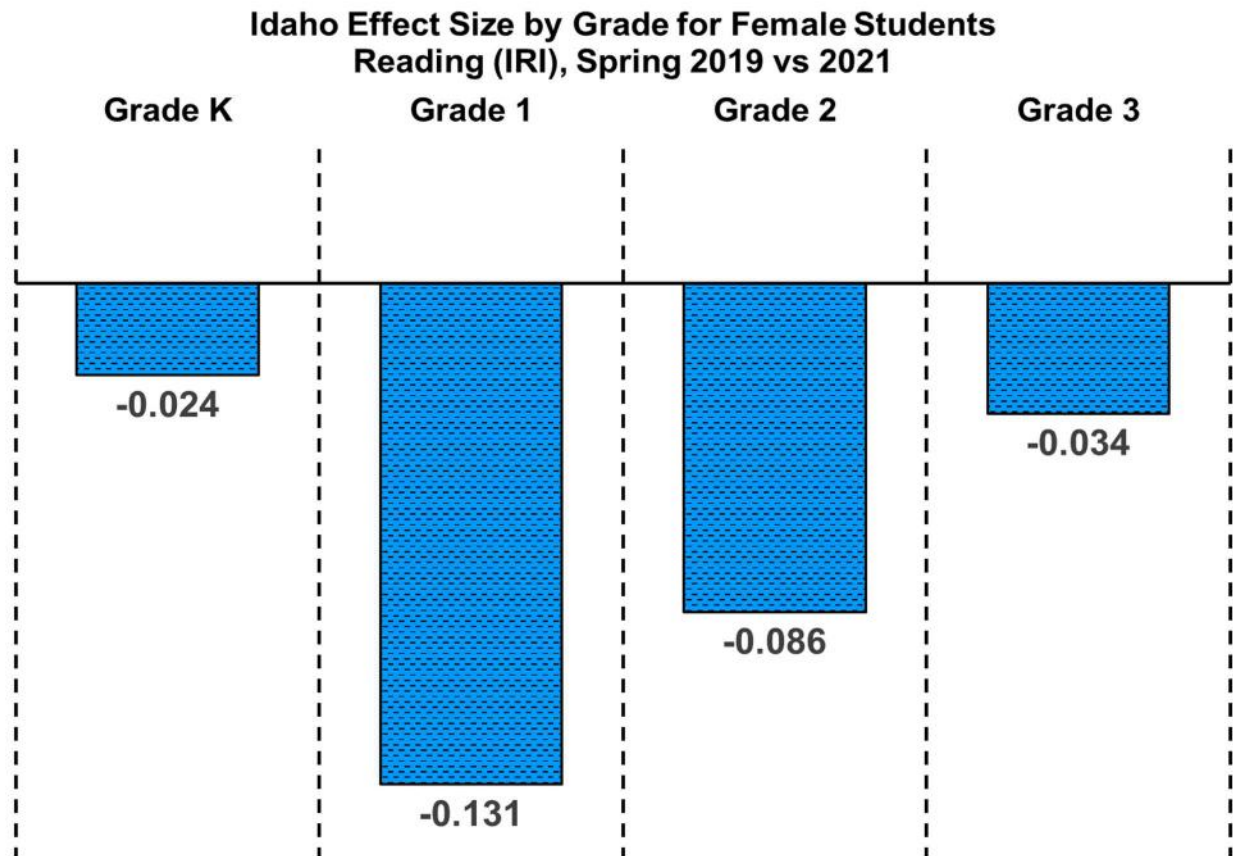| Grade K | Grade 1 | Grade 2 | Grade 3 |

-0.012

-0.122

-0.086

-0.018

Figure 5. Cohen *d* effect size for the magnitude of change in the Idaho Reading Indicator (IRI) average scale scores from spring 2019 to spring 2021, across four grades (K-3) for All Idaho Students.

Narratives:

During the pandemic (2019 to 2021), the Cohen *d* of the IRI measures of reading for the all-students group pointed to a loss in reading performance at each grade K-3.

During the pandemic (2019 to 2021), the Cohen *d* reading losses from smallest to largest for the all-students group were Kindergarten (-0.012), Grade 3 (-0.018), Grade 2 (-0.086), and Grade 1 (-0.122).

**Idaho Effect Size by Grade for Female Students
Reading (IRI), Spring 2019 vs 2021**

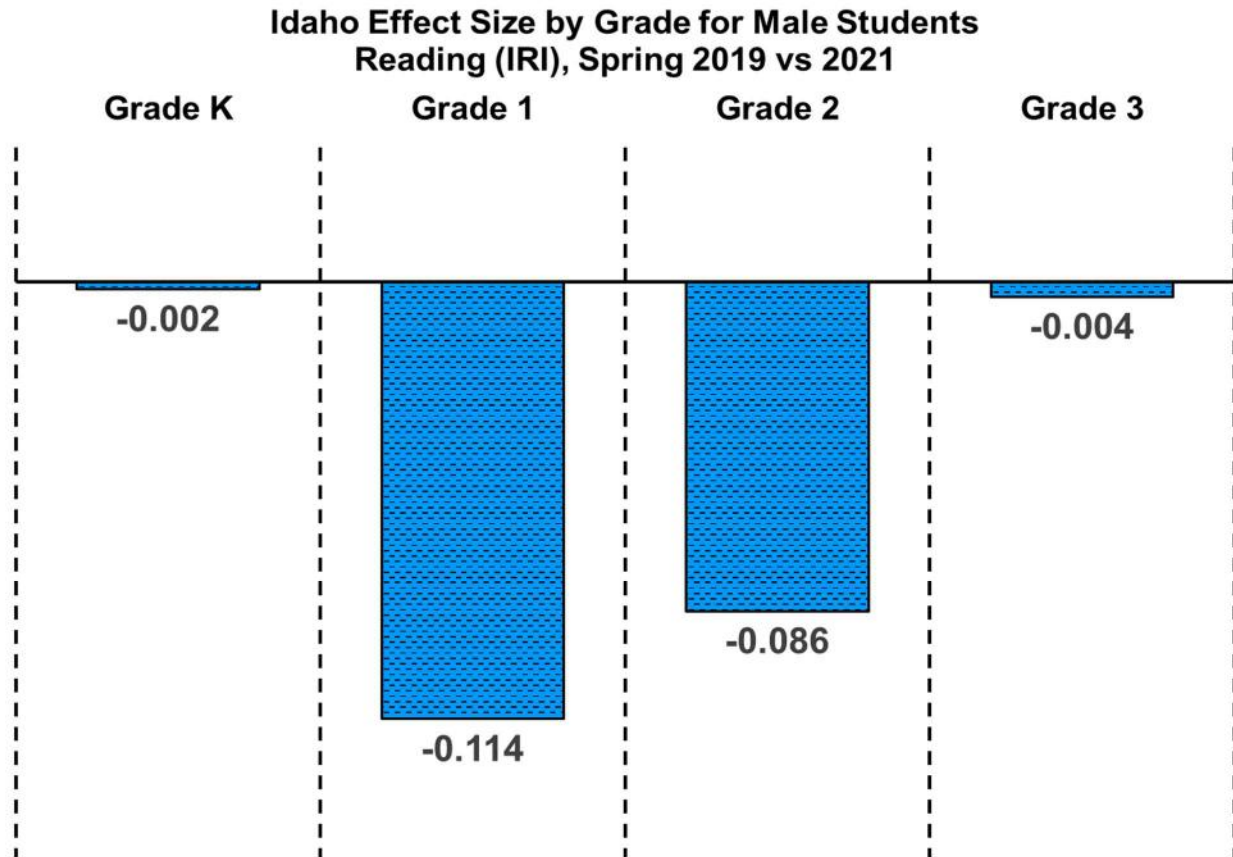| Grade K | Grade 1 | Grade 2 | Grade 3 |

-0.024

-0.131

-0.086

-0.034

Figure 6. Cohen *d* effect size for the magnitude of change in the Idaho Reading Indicator (IRI) average scale scores from spring 2019 to spring 2021, across four grades (K- 3) for Idaho Female Students.

Narratives:

During the pandemic (2019 to 2021), the Cohen d of the IRI measures of reading for the female Students pointed to a loss in reading performance at each grade K-3.

During the pandemic (2019 to 2021), the Cohen d reading losses from smallest to largest for the female students group were Kindergarten (-0.024), Grade 3 (-0.034), Grade 2 (-0.086), and Grade 1 (-0.131).
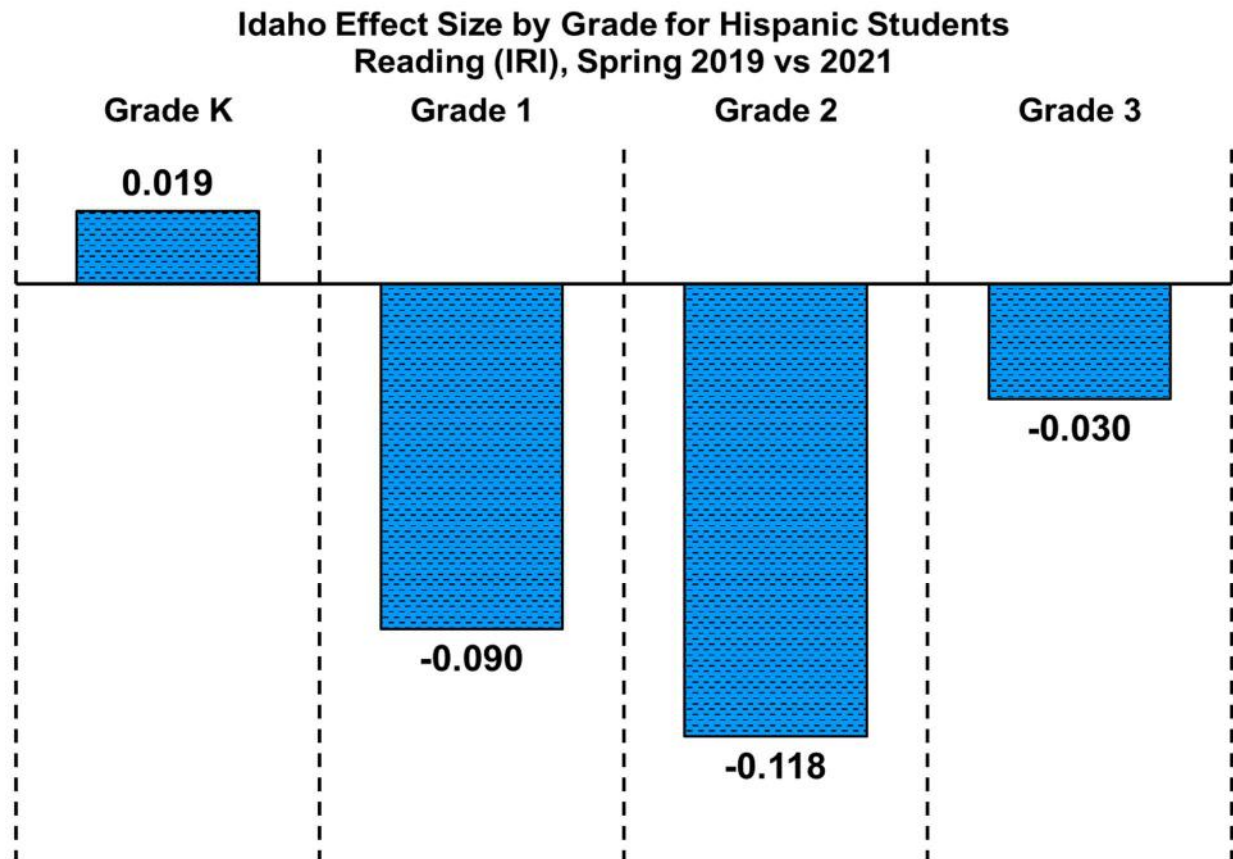
Figure 7. Cohen *d* effect size for the magnitude of change in the Idaho Reading Indicator (IRI) average scale scores from spring 2019 to spring 2021, across four grades (K- 3) for Idaho Male Students.

Narratives:

During the pandemic (2019 to 2021), the Cohen *d* of the IRI measures of reading for the male students group pointed to a loss in reading performance at grade K, 1, 2, and 3.

During the pandemic (2019 to 2021), the Cohen *d* reading losses from smallest to largest for the male student group were kindergarten (-0.002), grade 3 (-0.004), grade 2 (-0.086), and grade 1 (-0.114).

Idaho Effect Size by Grade for Hispanic Students
Reading (IRI), Spring 2019 vs 2021

| Grade K | Grade 1 | Grade 2 | Grade 3 |

```
    0.019
                                              -0.030


              -0.090

                        -0.118
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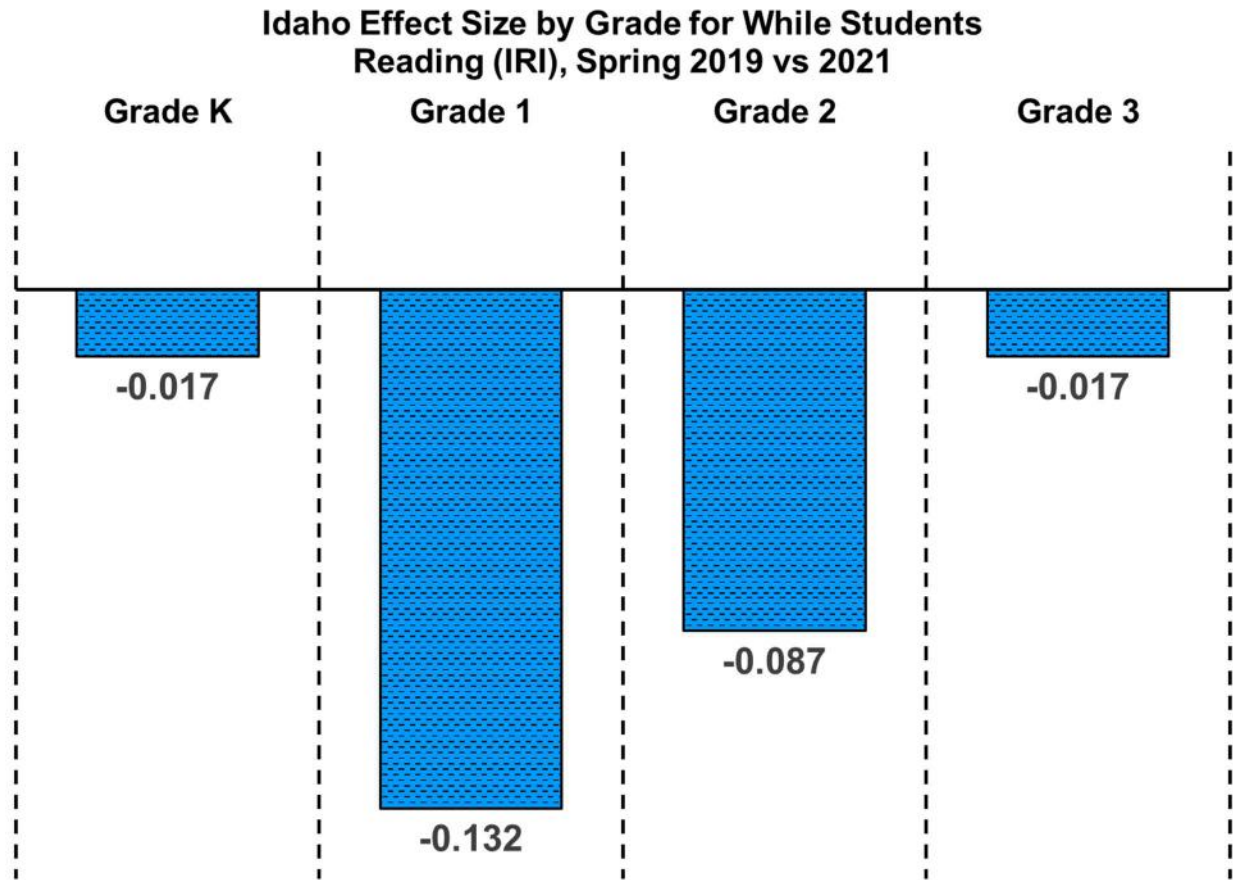
Figure 8. Cohen *d* effect size for the magnitude of change in the Idaho Reading Indicator (IRI) average scale scores from spring 2019 to spring 2021, across four grades (K- 3) for Idaho Hispanic Students.

Narratives:

During the pandemic (2019 to 2021), the Cohen *d* of the IRI measures of reading for Hispanic students pointed to a gain in reading performance in kindergarten, but to losses in grades 1, 2 and 3.

During the pandemic (2019 to 2021), the Cohen *d* for the Hispanic kindergarten gain in reading performance was +0.019. Reading losses from smallest to largest for Hispanic students were Grade 3 (–0.030), Grade 1 (–0.090), and Grade 2 (–0.118).

Idaho Effect Size by Grade for While Students
Reading (IRI), Spring 2019 vs 2021

Grade K	Grade 1	Grade 2	Grade 3
-0.017			-0.017
		-0.087	
	-0.132		

Figure 9. Cohen *d* effect size for the magnitude of change in the Idaho Reading Indicator (IRI) average scale scores from spring 2019 to spring 2021, across four grades (K- 3) for Idaho White Students.

Narratives:

During the pandemic (2019 to 2021), the Cohen *d* of the IRI measures of reading for White students pointed to a loss in reading performance at each grade K-3.

During the pandemic (2019 to 2021), the Cohen *d* reading losses from smallest to largest for the White students were Kindergarten tied with grade 3 (-0.017), grade 2 (-0.087), and grade 1 (-0.132).

Percentiles

Percentile changes over time help indicate trends in how students perform at different levels across the distribution. A percentile is defined by the percentage of students scoring lower than a particular scale score. For example, if the 25th percentile is 281, it means that 25 percent of the scores of students who participated in that spring administration of the **IRI** were below 281.

Percentile data show the **IRI** scale score attained by students performing at different achievement levels. This study looked at high performing students (90th percentile), high average students (75th), average for grade level (50th), below average (25th) and low performing students (10th) achievement ranges for twenty Idaho student groups identified for this study.

The terms percentiles and percentile ranks are often used interchangeably, but they have different uses. Percentile ranks (integers from 1 to 99) indicate the percentage of students that scored the same as or lower than a particular student. Percentiles indicate the percentage of scale scores in a distribution that were the same as or lower than a particular scale score.

The five percentiles for each student group were calculated by adding the group's mean score (m) to the product of its standard deviation (s) and its z score:

$$\text{Percentile} = m + (s \cdot z)$$

The z score is the point on the normal curve baseline associated with the area under the curve The five z scores for this study were retrieved from a *Proportions of Area under the Normal Curve* table from a beginning statistics textbook (Runyon & Haber, 1971).

Table 4 displays the changes in **IRI** percentiles from 2019 to 2021 for the five student groups (all students, females, males, Hispanics, and Whites) at five percentiles (90th, 75th, 50th, 25th, and 10th) for grades K-3.

Table 4. Change in IRI percentiles from 2019 to 2021 for five groups (All, Female, Male, Hispanic, and White) at five percentiles (90th, 75th, 50th, 25th, and 10th), Grades K-3. [Yellow marks indicate student group had a higher percentile in 2021 than in 2019.]

Grade K Percentiles	All	Female	Male	Hispanic	White
90th (High)	1.503	1.319	1.700	2.574	1.156
75th (High Avg)	0.701	0.524	0.882	1.494	0.493
50th (Average)	-0.190	-0.360	-0.026	0.294	-0.244
25th (Low Avg)	-1.082	-1.243	-0.934	-0.907	-0.980
10th (Low)	-1.884	-2.039	-1.752	-1.987	-1.643

Grade 1 Percentiles	All	Female	Male	Hispanic	White
90th (High)	-0.531	-0.576	-0.482	0.032	-0.605
75th (High Avg)	-1.272	-1.322	-1.222	-0.710	-1.351
50th (Average)	-2.096	-2.151	-2.044	-1.534	-2.181
25th (Low Avg)	-2.919	-2.980	-2.866	-2.358	-3.010
10th (Low)	-3.661	-3.726	-3.606	-3.100	-3.756

Grade 2 Percentiles	All	Female	Male	Hispanic	White
90th (High)	0.673	0.434	0.889	-0.792	0.913
75th (High Avg)	-0.452	-0.554	-0.363	-1.493	-0.321
50th (Average)	-1.701	-1.651	-1.755	-2.272	-1.693
25th (Low Avg)	-2.951	-2.748	-3.146	-3.052	-3.065
10th (Low)	-4.075	-3.735	-4.399	-3.753	-4.299

Grade 3 Percentiles	All	Female	Male	Hispanic	White
90th (High)	1.630	1.084	2.174	1.380	1.521
75th (High Avg)	0.670	0.230	1.106	0.421	0.628
50th (Average)	-0.396	-0.719	-0.082	-0.645	-0.365
25th (Low Avg)	-1.462	-1.668	-1.269	-1.711	-1.357
10th (Low)	-2.422	-2.522	-2.338	-2.670	-2.251

Narratives:

Twenty-six (26) of the 100 percentile data points were higher in 2021 than in 2019. The all-students group had 5, female students had 5, male students had 5, Hispanic students had 6, and White students had 5.

All the percentile gains (except one) were from "high performing" and "high average" students (90th and 75th percentile). Hispanic students had the sole percentile gain among "average for grade level" students (50th percentile).

Eight graphs were generated to display the Idaho Reading Indicator (IRI) scale scores at the 90th, 75th, 50th, 25th, and 10th percentiles from the spring assessments in 2019 (i.e., pre-pandemic) and 2021 (mid-pandemic). Four graphs (10-13) displayed results for the all-student, female student, and male student groups. Four graphs (14-17) displayed results for the all-student, Hispanic student, and White student groups.

IRI spring to spring percentile results for the all-students, female students, and male students:

✓ Figure 10. Idaho Reading Indicator at 90th, 75th, 50th, 25th, and 10th percentiles for all, female, and male students in 2019 (pre-pandemic) and 2021 (mid-pandemic), kindergarten.

✓ Figure 11. Idaho Reading Indicator at 90th, 75th, 50th, 25th, and 10th percentiles for all, female, and male students in 2019 (pre-pandemic) and 2021 (mid-pandemic), grade 1.

✓ Figure 12. Idaho Reading Indicator at 90th, 75th, 50th, 25th, and 10th percentiles for all, female, and male students in 2019 (pre-pandemic) and 2021 (mid-pandemic), grade 2,

✓ Figure 13. Idaho Reading Indicator at 90th, 75th, 50th, 25th, and 10th percentiles for all, female, and male students in 2019 (pre-pandemic) and 2021 (mid-pandemic), grade 3.

IRI percentile results for all students, Hispanic students, and White students:

✓ Figure 14. Idaho Reading Indicator at 90th, 75th, 50th, 25th, and 10th percentiles for all, Hispanic, and White students in 2019 (pre-pandemic) and 2021 (mid-pandemic), kindergarten.

✓ Figure 15. Idaho Reading Indicator at 90th, 75th, 50th, 25th, and 10th percentiles for all, Hispanic, and White students in 2019 (pre-pandemic) and 2021 (mid-pandemic), grade 1.

✓ Figure 16. Idaho Reading Indicator at 90th, 75th, 50th, 25th, and 10th percentiles for all, Hispanic, and White students in 2019 (pre-pandemic) and 2021 (mid-pandemic), grade 2.

✓ Figure 17. Idaho Reading Indicator at 90th, 75th, 50th, 25th, and 10th percentiles for all, Hispanic, and White students in 2019 (pre-pandemic) and 2021 (mid-pandemic), grade 3.
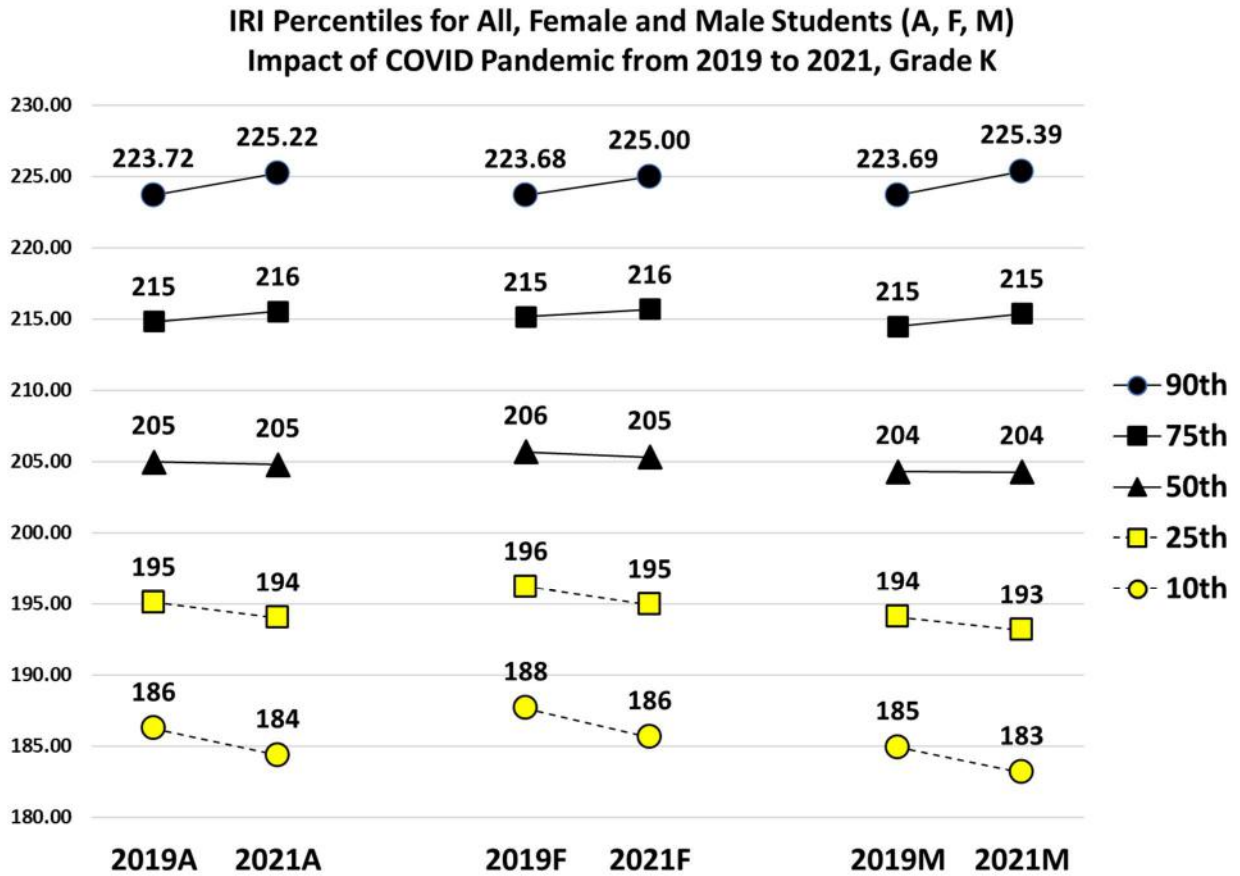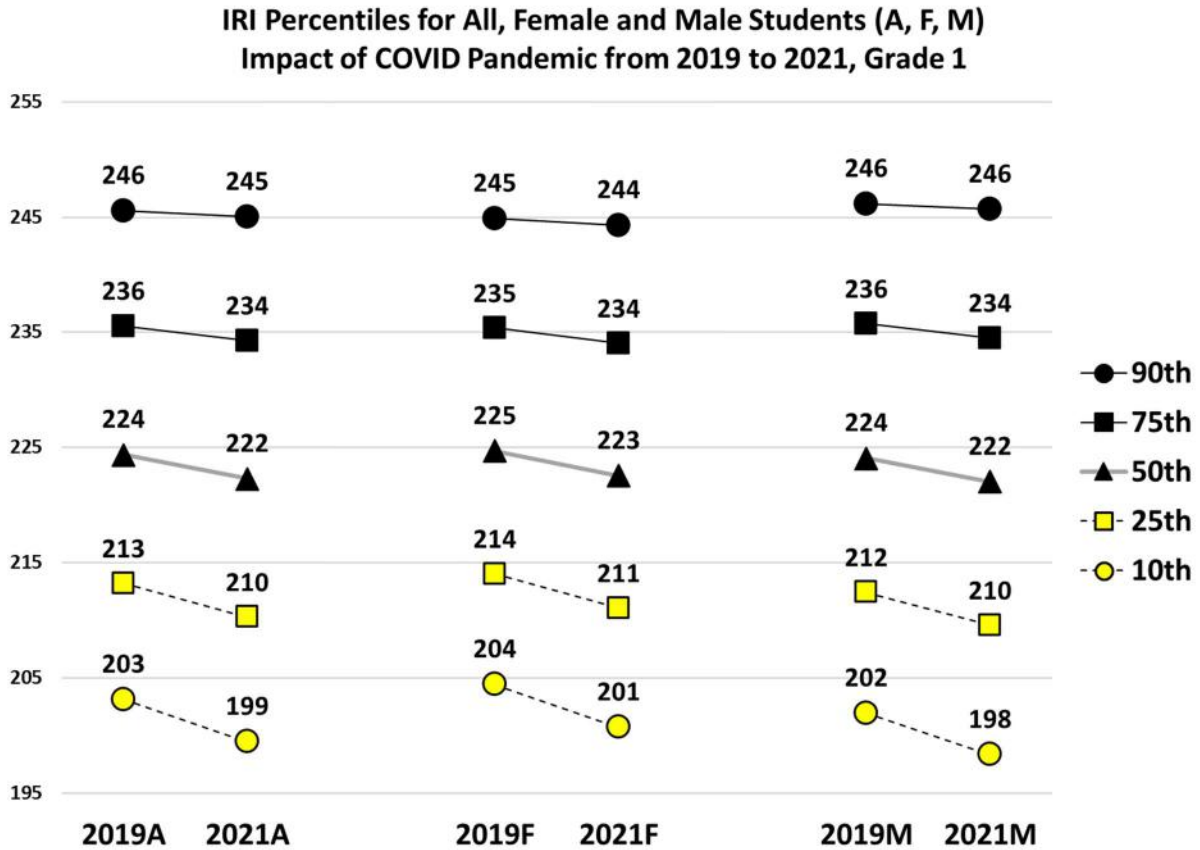
Figure Y. Idaho Reading Indicator (Spring IRI) 90th, 75th, 50th, 25th, and 10th percentiles for All Students, Female Students, and Male Students in 2019 (pre-pandemic) and 2021 (mid-pandemic), Kindergarten.

Note: The 90th percentiles are labeled with two decimal point precision to show the 2019 and 2021 scores are different among the three groups. With no decimal points, they labeled as identical. Please don't let yourself get confused by rounding.

Narratives:

All students (kindergarten) at 90th and 75th percentiles scored higher in 2021, the 50th percentile scores were the same, and at the 25th and 10th percentiles they scored lower in 2021.

Female students (kindergarten) at 90th and 75th scored higher in 2021, the 50th percentile scores were the same, and at the 25th and 10th percentiles they scored lower in 2021.

Male students (kindergarten) at 90th and 75th scored higher in 2021, the 50th percentile scores were the same, and at the 25th and 10th percentiles they scored lower in 2021.
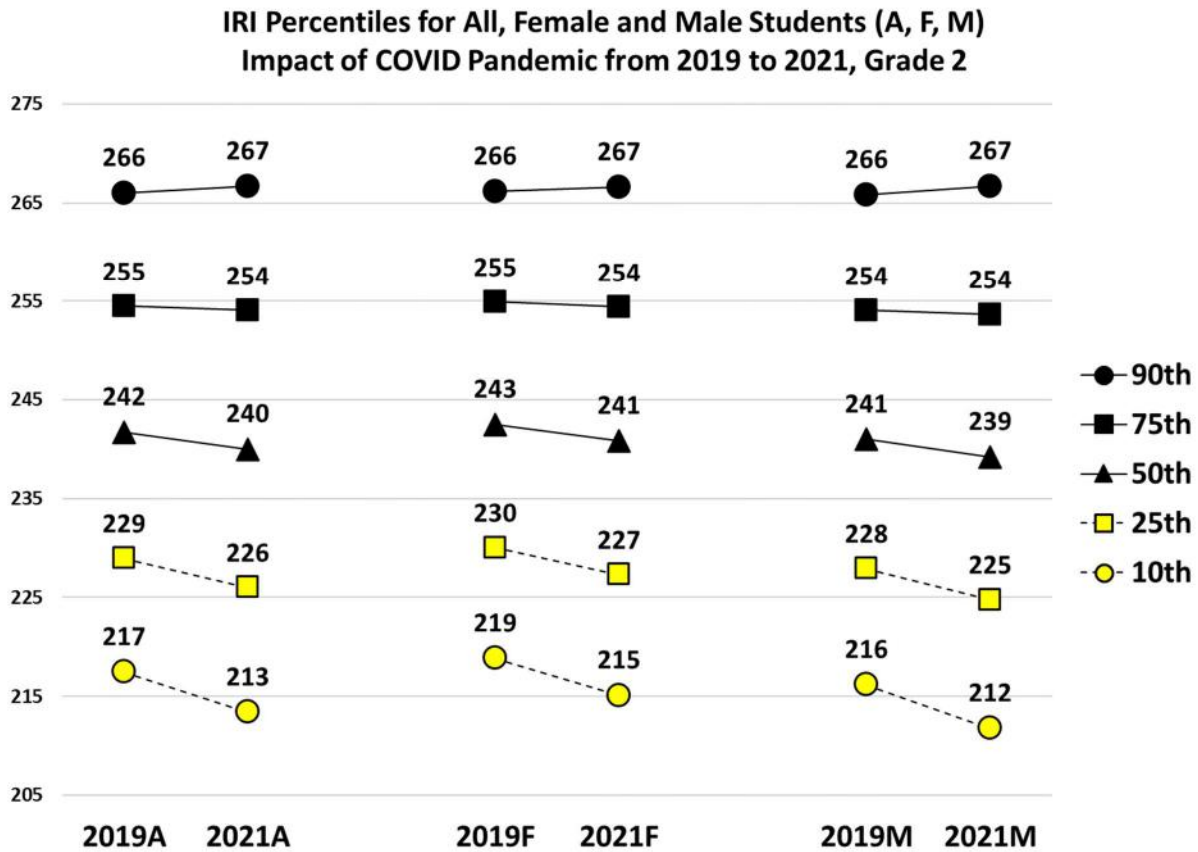
Figure Y. Idaho Reading Indicator (Spring IRI) 90th, 75th, 50th, 25th, and 10th percentiles for All Students, Female Students, and Male Students in 2019 (pre-pandemic) and 2021 (mid-pandemic), Grade 1.

Narratives:

All students (grade 1) at the 90th, 75th, 50th, 25th, and 10th percentiles scored lower in 2021 than in 2019.

Female students (grade 1) at the 90th, 75th, 50th, 25th, and 10th percentiles scored lower in 2021 than in 2019.

Male students (grade 1) at the 90th percentile scored the same in 2019 and 2021, while at the 75th, 50th, 25th, and 10th percentiles they scored lower in 2021 than in 2019.
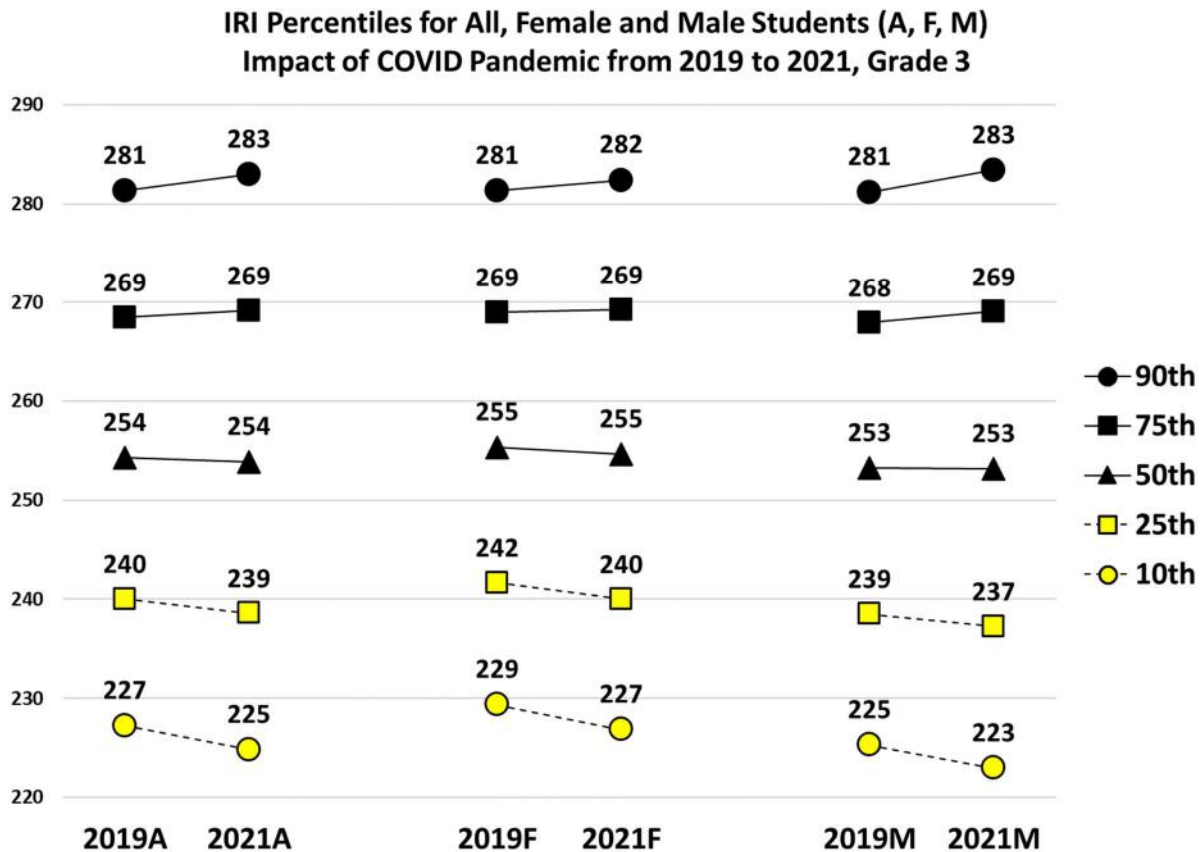
Figure Y. Idaho Reading Indicator (Spring IRI) 90th, 75th, 50th, 25th, and 10th percentiles for All Students, Female Students, and Male Students in 2019 (pre-pandemic) and 2021 (mid-pandemic), Grade 2.

Narratives:

All students (grade 2) at the 90th percentile scored higher in 2021, while students at the 75th, 50th, 25th, and 10th percentiles scored lower in 2021 than in 2019.

Female students (grade 2) at the 90th percentile scored higher in 2021, while students at the 75th, 50th, 25th, and 10th percentiles scored lower in 2021 than in 2019.

Male students (grade 2) at the 90th percentile scored higher in 2021, the 75th percentile was unchanged from 2019 to 2021, while the 50th, 25th, and 10th percentiles were lower in 2021 than in 2019.

Figure Y.   Idaho Reading Indicator (Spring IRI) 90th, 75th, 50th, 25th, and 10th percentiles for All Students, Female Students, and Male Students in 2019 (pre-pandemic) and 2021 (mid-pandemic), Grade 3.

Narratives:

All students (grade 3) at the 90th and 75th percentiles scored higher in 2021, the 50th percentile scores were the same, and at the 25th and 10th percentiles they scored lower in 2021.

Female students (grade 3) at 90th and 75th scored higher in 2021, the 50th percentile scores were the same, and at the 25th and 10th percentiles they scored lower in 2021.

Male students (grade 3) at 90th and 75th scored higher in 2021, the 50th percentile scores were the same, and at the 25th and 10th percentiles they scored lower in 2021.
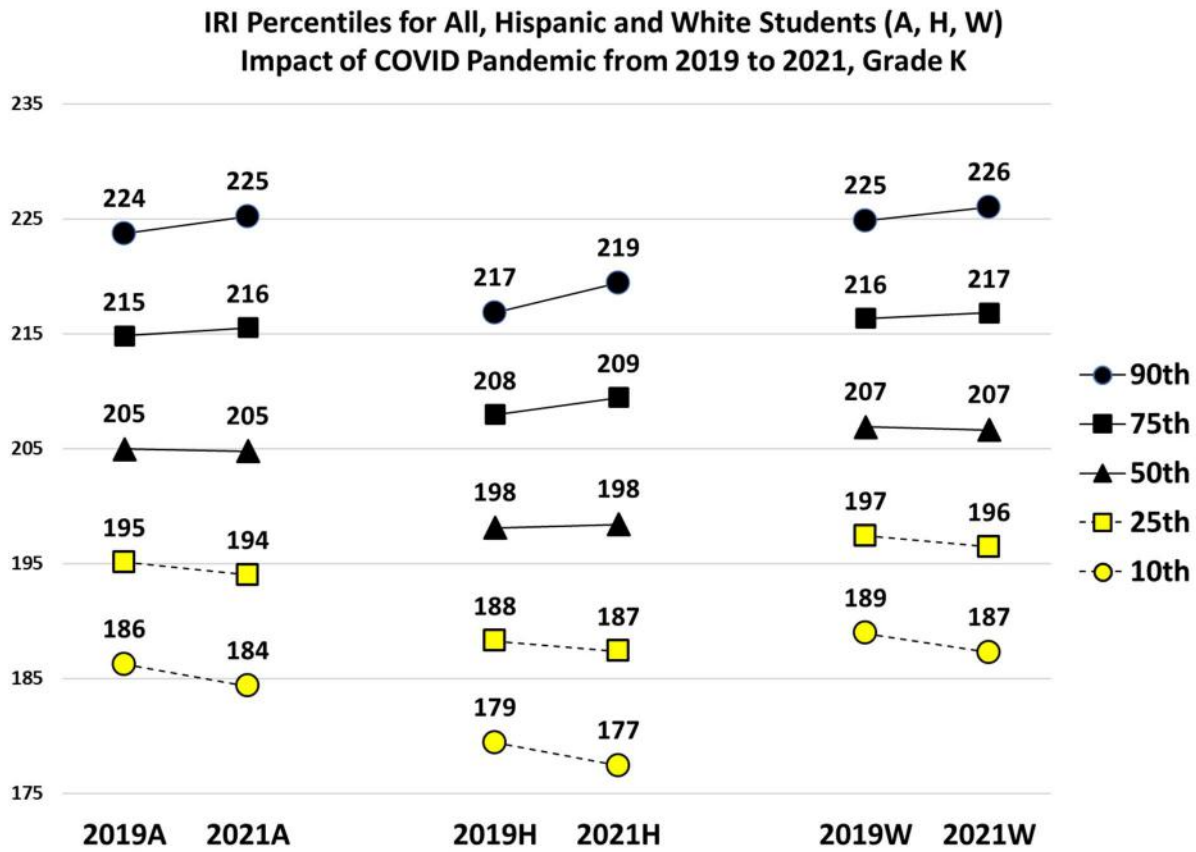
Figure Y. Idaho Reading Indicator (Spring IRI) 90th, 75th, 50th, 25th, and 10th percentiles for All Students, Hispanic Students, and White Students in 2019 (pre-pandemic) and 2021 (mid-pandemic), Kindergarten.

Narratives:

All students (kindergarten) at 90th and 75th percentiles scored higher in 2021, the 50th percentile scores were the same, and at the 25th and 10th percentiles they scored lower in 2021.

Hispanic students (kindergarten) at 90th and 75th scored higher in 2021, the 50th percentile scores were the same, and at the 25th and 10th percentiles they scored lower in 2021.

White students (kindergarten) at 90th and 75th scored higher in 2021, the 50th percentile scores were the same, and at the 25th and 10th percentiles they scored lower in 2021.
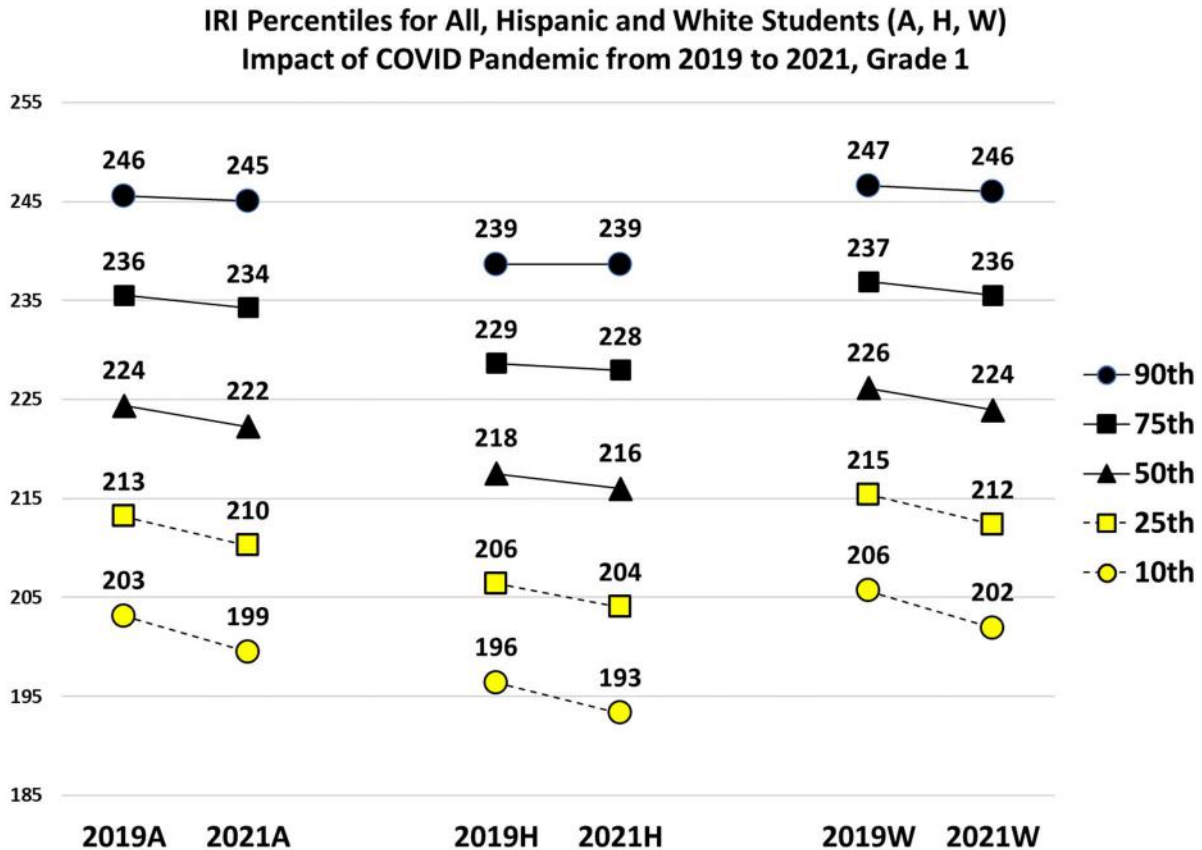
Figure Y. Idaho Reading Indicator (Spring IRI) 90th, 75th, 50th, 25th, and 10th percentiles for All Students, Hispanic Students, and White Students in 2019 (pre-pandemic) and 2021 (mid-pandemic), Grade 1.

Narratives:

All students (grade 1) at the 90th, 75th, 50th, 25th, and 10th percentiles scored lower in 2021 than in 2019.

Hispanic students (grade 1) at the 90[th] percentile had the same scale score in 2019 and 2021, while at 75th, 50th, 25th, and 10th percentiles they scored lower in 2021 than in 2019.

White students (grade 1) at the 90th, 75th, 50th, 25th, and 10th percentiles scored lower in 2021 than in 2019.

IRI Percentiles for All, Hispanic and White Students (A, H, W) Impact of COVID Pandemic from 2019 to 2021, Grade 2
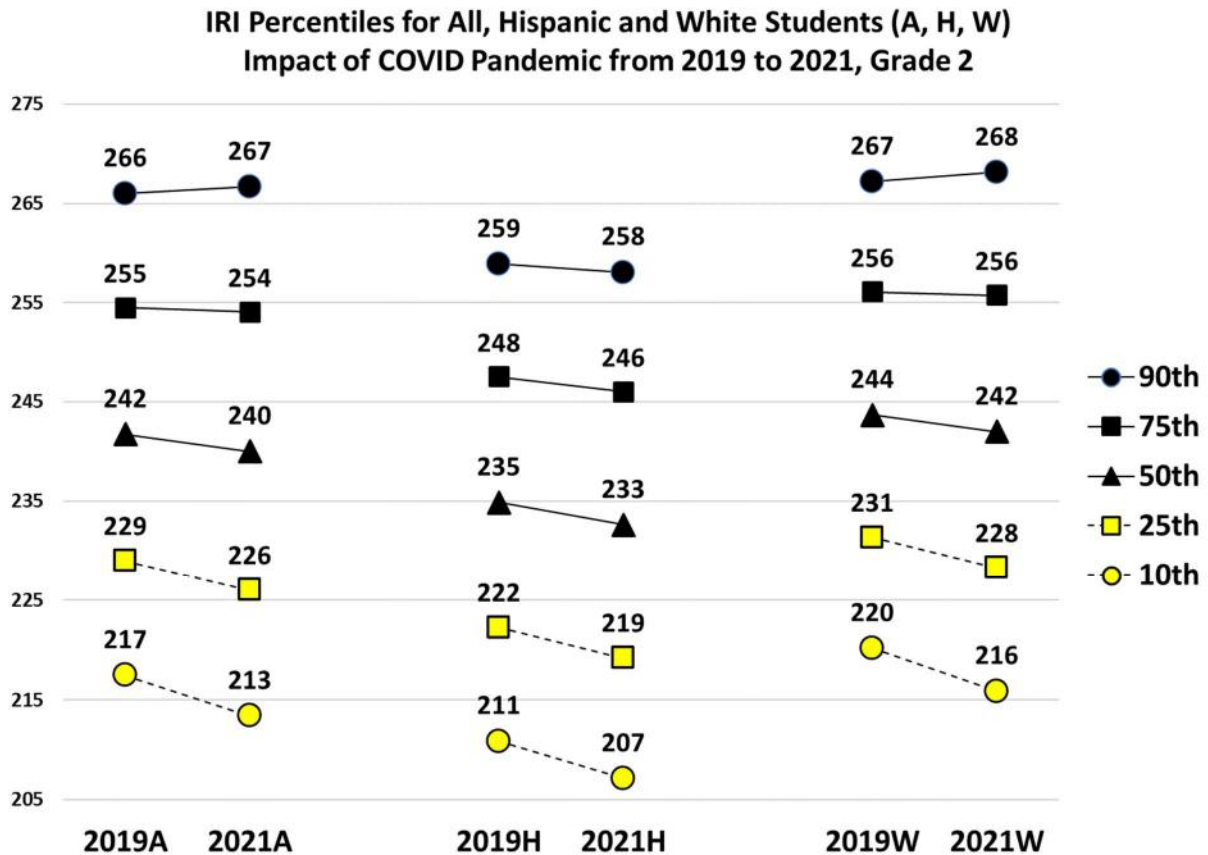
Figure Y. Idaho Reading Indicator (Spring IRI) 90th, 75th, 50th, 25th, and 10th percentiles for All Students, Hispanic Students, and White Students in 2019 (pre-pandemic) and 2021 (mid-pandemic), Grade 2.

Narratives:

All students (grade 2) at the 90th percentile scored higher in 2021, while students at the 75th, 50th, 25th, and 10th percentiles scored lower in 2021 than in 2019.

Hispanic students (grade 2) at the 90th, 75th, 50th, 25th, and 10th percentiles scored lower in 2021 than in 2019.

White students (grade 2) at the 90th percentile scored higher in 2021, while students at the 75th had no change. White students at the 50th, 25th, and 10th percentiles scored lower in 2021 than in 2019.

IRI Percentiles for All, Hispanic and White Students (A, H, W)
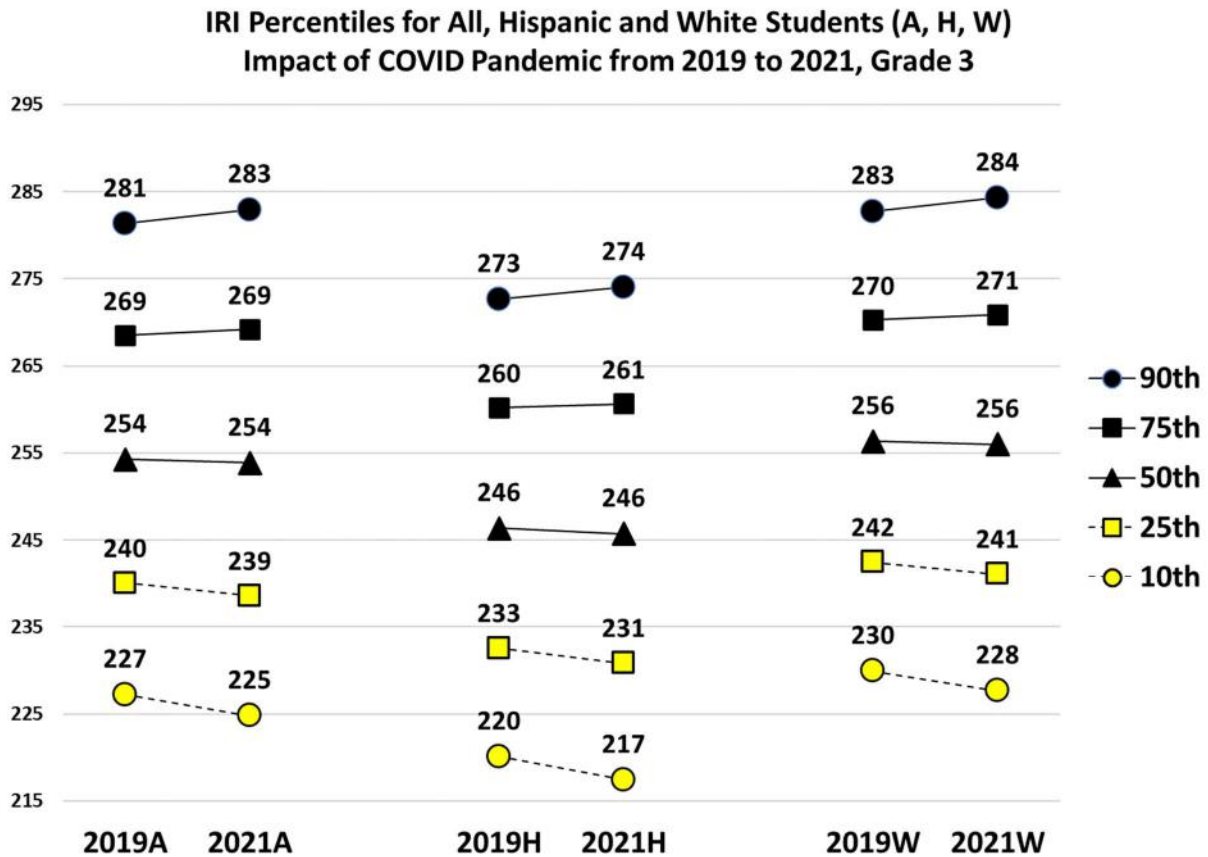**Impact of COVID Pandemic from 2019 to 2021, Grade 3**

Figure Y. Idaho Reading Indicator (Spring IRI) 90th, 75th, 50th, 25th, and 10th percentiles for All Students, Hispanic Students, and White Students in 2019 (pre-pandemic) and 2021 (mid-pandemic), Grade 3.

Narratives:

All students (grade 3) at the 90th and 75th percentiles scored higher in 2021, the 50th percentile scores were the same, and at the 25th and 10th percentiles they scored lower in 2021.

Hispanic students (grade 3) at 90th and 75th percentiles scored higher in 2021, the 50th percentile scores were the same, and at the 25th and 10th percentiles they scored lower in 2021.

White students (grade 3) at 90th and 75th percentiles scored higher in 2021, the 50th percentile scores were the same, and at the 25th and 10th percentiles they scored lower in 2021.

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