



**2020-21 MAP Growth Test Scores Analyses Across years  
Prepared by the Office of Data, Research, and Evaluation**

**September 16, 2021**

This brief is prepared to describe changes of Nebraska students’ academic performance on the MAP Growth tests. MAP Growth is a computer adaptive testing for grades 3-8, administered at different intervals throughout the year. The Nebraska Department of Education (NDE) has made an optional interim growth assessment—MAP Growth—provided by NWEA available to districts at no cost to use with other interim assessments of their choice. Since the 2018-19 academic year, most of the school districts in Nebraska participated in one of three annual administrations: Fall, Winter, and Spring as displayed in Table 1.

Table 1. Numbers of Participated School Districts and Schools (All Grades)

Test Administration Term	N of School Districts	N of Schools
Fall 2018-2019	243	912
Winter 2018-2019	199	749
Spring 2018-2019	216	747
Fall 2019-2020	242	918
Winter 2019-2020	218	798
Spring 2019-2020	51	123
Fall 2020-2021	235	738
Winter 2020-2021	226	738
Spring 2020-2021	38	101

Schools and school districts can choose administrations of tests among the three different times in a year; it is shown different numbers of participated schools and school districts across years. Because of that, it is not appropriate to use interim test scores to evaluate students’ general performance in the public schools. It is not recommended either to compare results from each administration with ones administered previously, because not the same students participated in the test administrations.

Although it is not recommended to use interim test scores as direct measures of state population students’ performance in academic achievements, there is still useful information from the test outcomes. We can identify that not many schools and districts participated in the tests since the Spring 2019-20 administration comparing to the previous years. Information from participation of the test administrations can directly indicate access of one of most important academic activities for students within schools and school districts. In this brief, comparisons in assessment participation, mean differences on scale scores, and mean differences students across years based on grade level information were provided.

Some of the key findings are listed as follows:

- Spring administrations show most impacted results in the MAP Growth test participation. Table 2 shows the participation information across years and differences calculated using the most recent administration and averages of the previous years' administrations.

Table 2. Numbers of tests, participated schools and districts (Grades 3-8)

Term	SD	Schools	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
Fall 2018-2019	235	751	57497	59558	62636	60635	64067	62572
Fall 2019-2020	234	747	56556	59274	63894	65633	63533	64846
Fall 2020-2021	235	738	43178	42831	50191	52473	52328	49503
Difference	0.5	-11	-13848.5	-16585	-13074	-10661	-11472	-14206
Winter 2018-2019	185	603	48290	49481	53093	48534	50531	49110
Winter 2019-2020	209	646	49168	51953	56066	52679	49605	51519
Winter 2020-2021	215	603	33523	33693	38074	38366	37998	36049
Difference	18	-21.5	-15206	-17024	-16505.5	-12240.5	-12070	-14265.5
Spring 2018-2019	235	614	46390	48215	51112	49515	49780	48728
Spring 2019-2020	38	97	3716	880	915	850	1242	1449
Spring 2020-2021	30	80	2905	530	586	1139	1471	1562
Difference	-106.5	-275.5	-22148	-24017.5	-25427.5	-24043.5	-24040	-23526.5

- In Table 3, Fall admin results for 3<sup>rd</sup>-8<sup>th</sup> grade Students' performance of the aggregated grade levels across years showed slight decreases in most of the subjects; the mean score for Language Usage and Reading dropped about 1 scale score point; Mathematics score decreased about 2 scale score points from previous years' average; about 2 points increased for the mean Science scale score.

Table 3. Descriptive Statistics for Students in Fall Administrations across years (Grades 3-8)

Subject	Term	N	Mean	Sd	Median	Min	Max	Skew	Kurt
Language Usage	2018-2019	50,480	209.19	16.11	211	139	256	-0.66	0.54
	2019-2020	52,321	209.17	16.15	211	143	261	-0.68	0.63
	2020-2021	41,333	208.17	16.01	210	134	263	-0.63	0.54
Reading	2018-2019	123,512	207.23	18.38	209	121	264	-0.54	0.17
	2019-2020	124,859	207.45	18.31	210	113	264	-0.55	0.18
	2020-2021	106,221	206.64	18.30	209	126	285	-0.50	0.14
Mathematics	2018-2019	124,192	212.43	20.07	213	114	304	-0.18	-0.11
	2019-2020	124,913	212.67	19.85	213	104	296	-0.17	-0.05
	2020-2021	100,779	210.55	19.79	211	121	296	-0.16	-0.05
Science	2018-2019	68,669	204.52	13.73	205	148	258	-0.33	0.14
	2019-2020	70,580	205.03	13.65	206	144	265	-0.29	0.17
	2020-2021	41,758	207.48	12.69	208	151	257	-0.29	0.39

- Winter admin results for 3<sup>rd</sup> -8<sup>th</sup> grade Students' performance of the aggregated grade levels across years displayed in Table 4; the mean scores for Language Usage, Reading, and Mathematics are comparable to the previous scores; about 3 points increased for the mean Science scale score.

Table 4. Descriptive Statistics for Students in Winter Administrations across years (Grades 3-8)

Subject	Term	N	Mean	Sd	Median	Min	Max	Skew	Kurt
Language Usage	2018-2019	40,147	213.18	14.70	215	144	263	-0.69	1.03
	2019-2020	36,979	212.08	14.48	213	145	262	-0.62	0.99
	2020-2021	33,045	211.15	14.54	212	146	260	-0.60	0.91
Reading	2018-2019	103,656	210.24	17.26	212	121	265	-0.62	0.54
	2019-2020	110,056	210.54	17.19	212	116	271	-0.61	0.59
	2020-2021	81,606	210.88	16.67	212	121	276	-0.54	0.52
Mathematics	2018-2019	103,656	210.24	17.26	212	121	265	-0.62	0.54
	2019-2020	110,056	210.54	17.19	212	116	271	-0.61	0.59
	2020-2021	81,606	210.88	16.67	212	121	276	-0.54	0.52
Science	2018-2019	50,834	206.12	13.44	207	151	264	-0.27	0.17
	2019-2020	53,228	206.99	13.36	207	149	266	-0.25	0.23
	2020-2021	30,070	210.16	12.17	210	153	261	-0.22	0.41

- Table 5 Shows Spring results for 3<sup>rd</sup> -8<sup>th</sup> grade Students' performance of the aggregated grade levels across years showed slight increases in most of the subjects but Language Usage; the mean score for Reading and Mathematics showed increases; about 1.6 points increased for the mean Science scale score.

Table 5. Descriptive Statistics for Students in Spring Administrations across years (Grades 3-8)

Subject	Term	N	Mean	Sd	Median	Min	Max	Skew	Kurt
Language Usage	2018-2019	33,678	214.58	14.79	216	147	268	-0.64	1.00
	2019-2020	1,310	214.33	13.75	215	146	261	-0.62	1.34
	2020-2021	1,262	214.60	14.24	216	153	264	-0.91	2.12
Reading	2018-2019	100,706	212.12	17.28	214	127	275	-0.64	0.59
	2019-2020	4,581	205.39	16.70	207	137	265	-0.62	0.86
	2020-2021	4,082	206.18	17.01	207	135	267	-0.47	0.50
Mathematics	2018-2019	100,706	212.12	17.28	214	127	275	-0.64	0.59
	2019-2020	4,581	205.39	16.70	207	137	265	-0.62	0.86
	2020-2021	4,082	206.18	17.01	207	135	267	-0.47	0.50
Science	2018-2019	58,942	208.76	14.06	209	141	264	-0.25	0.09
	2019-2020	1,309	211.45	11.47	211	161	259	-0.15	0.51
	2020-2021	1,221	213.06	11.42	213	164	251	-0.19	0.33

- Figure 1 shows the aggregated results for all test subjects across administrations and years. Language Usage and Science show consistent increasing trends across administration, however, comparing to the earlier year administrations, Mathematics and Reading show decreases. Due to the school close and changes in learning modes, it is depicting impacts from both participation and performance changes, however, must be noted that interpretation of this results as a learning loss or the changes in students' growths is not encouraged. The results are generated from outcomes in aggregated grade levels. More precise descriptions will be available after analyzing results using matched samples across administrations by grade levels.

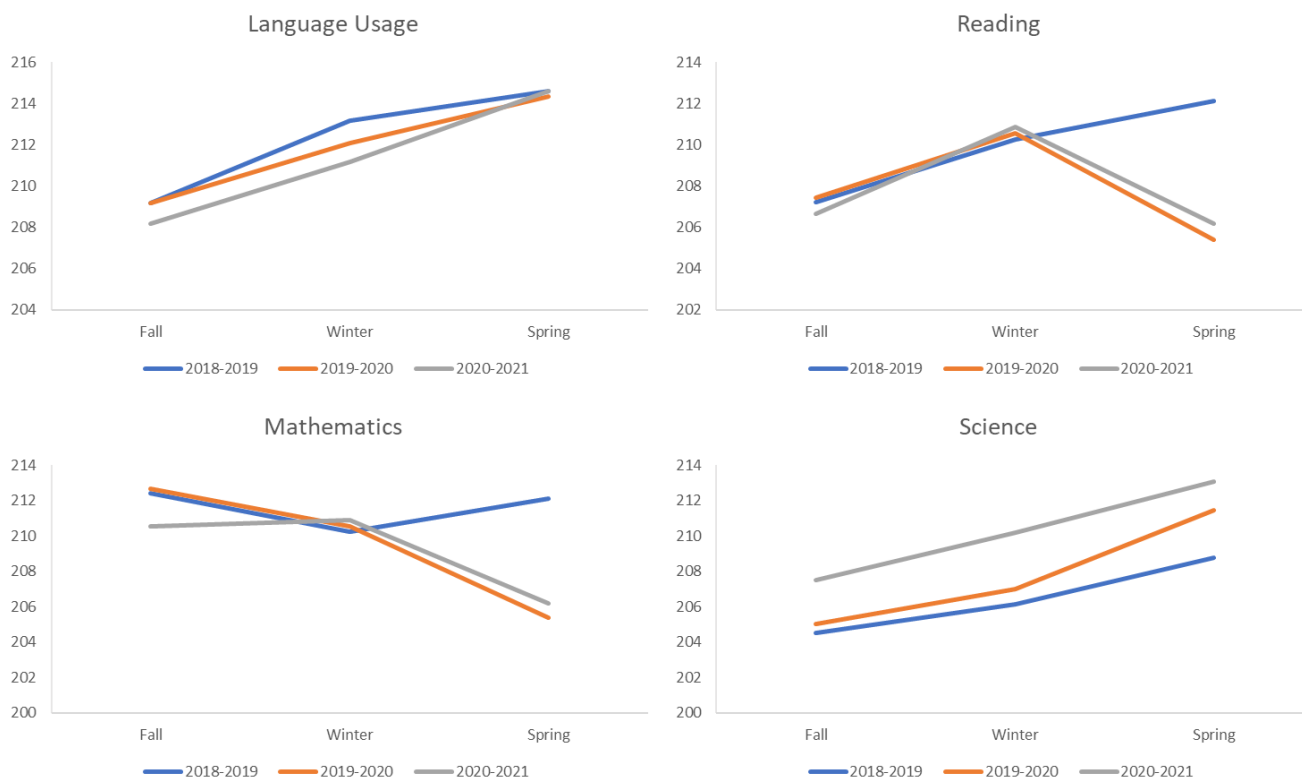


Figure 1. Mean scale score changes for each administration across years

- Tables 6 through 9 describe students participation numbers and proportions (test taker's proportion compared to total enrolled students) in the test administration by grade levels. Reading and Mathematics usually have higher participation rates, however, Spring 2019-20 and Spring 2020-21 showed lowest participation throughout the grade levels regardless of test subjects.

Table 6. Enrollment and participated Students in Test Administrations across years (Language usage)

Grade	3	4	5	6	7	8	Overall
<b>Enroll_18</b>	<b>23,658</b>	<b>24,239</b>	<b>24,243</b>	<b>22,626</b>	<b>23,844</b>	<b>23,525</b>	<b>142,135</b>
N_F18	7,685	7,896	7,842	9,651	10,145	9,757	52,976
Part_F18	32.50%	32.60%	32.30%	42.70%	42.50%	41.50%	37.35%
N_W19	5,147	5,313	5,344	7,987	8,821	8,051	40,663
Part_W19	21.80%	21.90%	22.00%	35.30%	37.00%	34.20%	28.70%
N_S19	4,963	5,304	5,144	6,082	5,824	5,816	33,133
Part_S19	21.00%	21.90%	21.20%	26.90%	24.40%	24.70%	23.35%
<b>Enroll_19</b>	<b>23,068</b>	<b>23,791</b>	<b>24,348</b>	<b>24,264</b>	<b>22,948</b>	<b>23,965</b>	<b>142,384</b>
N_F19	7,489	8,254	7,915	9,616	10,144	9,935	53,353
Part_F19	32.50%	34.70%	32.50%	39.60%	44.20%	41.50%	37.50%
N_W20	5,600	6,521	6,037	6,248	6,695	6,245	37,346
Part_W20	24.30%	27.40%	24.80%	25.80%	29.20%	26.10%	26.27%
N_S20	146	189	222	157	260	325	1,299
Part_S20	0.60%	0.80%	0.90%	0.60%	1.10%	1.40%	0.90%
<b>Enroll_20</b>	<b>22,939</b>	<b>22,855</b>	<b>23,511</b>	<b>24,122</b>	<b>24,291</b>	<b>22,781</b>	<b>140,499</b>
N_F20	5,757	5,742	5,985	7,867	8,404	8,040	41,795
Part_F20	25.10%	25.10%	25.50%	32.60%	34.60%	35.30%	29.70%
N_W21	4,747	4,979	5,124	6,031	6,336	5,997	33,214
Part_W21	20.70%	21.80%	21.80%	25.00%	26.10%	26.30%	23.62%
N_S21	97	96	82	298	299	388	1,260
Part_S21	0.40%	0.40%	0.30%	1.20%	1.20%	1.70%	0.87%

Table 7. Enrollment and participated Students in Test Administrations across years (Reading)

Grade	3	4	5	6	7	8	Overall
<b>Enroll_18</b>	<b>23,658</b>	<b>24,239</b>	<b>24,243</b>	<b>22,626</b>	<b>23,844</b>	<b>23,525</b>	<b>142,135</b>
N_F18	22,885	23,241	23,164	21,884	22,875	22,252	136,301
Part_F18	96.73%	95.88%	95.55%	96.72%	95.94%	94.59%	95.90%
N_W19	20,320	20,552	20,552	17,631	18,103	17,398	114,556
Part_W19	85.89%	84.79%	84.77%	77.92%	75.92%	73.96%	80.54%
N_S19	16,948	17,271	17,233	16,117	16,013	15,379	98,961
Part_S19	71.64%	71.25%	71.08%	71.23%	67.16%	65.37%	69.62%
<b>Enroll_19</b>	<b>23,068</b>	<b>23,791</b>	<b>24,348</b>	<b>24,264</b>	<b>22,948</b>	<b>23,965</b>	<b>142,384</b>
N_F19	22,501	22,935	23,497	23,620	22,283	22,752	137,588
Part_F19	97.54%	96.40%	96.50%	97.35%	97.10%	94.94%	96.64%
N_W20	20,652	21,188	21,649	20,176	18,319	19,110	121,094
Part_W20	89.53%	89.06%	88.91%	83.15%	79.83%	79.74%	85.04%
N_S20	3111	269	229	601	619	674	5,503
Part_S20	13.49%	1.13%	0.94%	2.48%	2.70%	2.81%	3.92%
<b>Enroll_20</b>	<b>22,939</b>	<b>22,855</b>	<b>23,511</b>	<b>24,122</b>	<b>24,291</b>	<b>22,781</b>	<b>140,499</b>
N_F20	20,128	19,483	19,956	20,458	19,705	18,445	118,175
Part_F20	87.75%	85.25%	84.88%	84.81%	81.12%	80.97%	84.13%
N_W21	16,469	15,554	15,681	16,273	14,943	14,038	92,958
Part_W21	71.79%	68.06%	66.70%	67.46%	61.52%	61.62%	66.19%
N_S21	2567	132	194	637	700	745	4,975
Part_S21	11.19%	0.58%	0.83%	2.64%	2.88%	3.27%	3.56%

Table 8. Enrollment and participated Students in Test Administrations across years (Mathematics)

Grade	3	4	5	6	7	8	Overall
<b>Enroll_18</b>	<b>23,658</b>	<b>24,239</b>	<b>24,243</b>	<b>22,626</b>	<b>23,844</b>	<b>23,525</b>	<b>142,135</b>
N_F18	23,007	23,297	23,259	21,975	23,065	22,413	137,016
Part_F18	97.25%	96.11%	95.94%	97.12%	96.73%	95.27%	96.41%
N_W19	20,384	20,682	20,586	17,667	18,259	17,635	115,213
Part_W19	86.16%	85.33%	84.92%	78.08%	76.58%	74.96%	81.00%
N_S19	16,881	17,179	17,414	16,304	15,616	15,223	98,617
Part_S19	71.35%	70.87%	71.83%	72.06%	65.49%	64.71%	69.39%
<b>Enroll_19</b>	<b>23,068</b>	<b>23,791</b>	<b>24,348</b>	<b>24,264</b>	<b>22,948</b>	<b>23,965</b>	<b>142,384</b>
N_F19	22,499	22,935	23,499	23,668	22,278	22,778	137,657
Part_F19	97.53%	96.40%	96.51%	97.54%	97.08%	95.05%	96.69%
N_W20	20,429	21,213	21,400	20,091	18,450	19,271	120,854
Part_W20	88.56%	89.16%	87.89%	82.80%	80.40%	80.41%	84.87%
N_S20	280	241	239	566	705	771	2,802
Part_S20	1.21%	1.01%	0.98%	2.33%	3.07%	3.22%	1.97%
<b>Enroll_20</b>	<b>22,939</b>	<b>22,855</b>	<b>23,511</b>	<b>24,122</b>	<b>24,291</b>	<b>22,781</b>	<b>140,499</b>
N_F20	17,438	16,954	19,859	20,446	19,692	18,397	112,786
Part_F20	76.02%	74.18%	84.47%	84.76%	81.07%	80.76%	80.21%
N_W21	13,967	14,076	14,477	14,383	14,090	13,165	84,158
Part_W21	60.89%	61.59%	61.58%	59.63%	58.01%	57.79%	59.91%
N_S21	147	232	152	592	728	700	2,551
Part_S21	0.64%	1.02%	0.65%	2.45%	3.00%	3.07%	1.80%

Table 9. Enrollment and participated Students in Test Administrations across years (Science)

Grade	3	4	5	6	7	8	Overall
<b>Enroll_18</b>	<b>23,658</b>	<b>24,239</b>	<b>24,243</b>	<b>22,626</b>	<b>23,844</b>	<b>23,525</b>	<b>142,135</b>
N_F18	8,312	9,698	13,204	12,200	14,061	14,376	71,851
Part_F18	35.13%	40.01%	54.47%	53.92%	58.97%	61.11%	50.60%
N_W19	6,167	6,921	10,763	8,605	9,892	10,378	52,726
Part_W19	26.07%	28.55%	44.40%	38.03%	41.49%	44.11%	37.11%
N_S19	6,632	7,687	10,479	10,139	11,491	11,481	57,909
Part_S19	28.03%	31.71%	43.22%	44.81%	48.19%	48.80%	40.80%
<b>Enroll_19</b>	<b>23,068</b>	<b>23,791</b>	<b>24,348</b>	<b>24,264</b>	<b>22,948</b>	<b>23,965</b>	<b>142,384</b>
N_F19	7,827	9,180	13,615	13,698	13,899	15,145	73,364
Part_F19	33.93%	38.59%	55.92%	56.45%	60.57%	63.20%	51.44%
N_W20	5,872	6,683	11,201	10,042	10,093	11,429	55,320
Part_W20	25.46%	28.09%	46.00%	41.39%	43.98%	47.69%	38.77%
N_S20	129	171	210	244	303	327	1,384
Part_S20	0.56%	0.72%	0.86%	1.01%	1.32%	1.36%	0.97%
<b>Enroll_20</b>	<b>22,939</b>	<b>22,855</b>	<b>23,511</b>	<b>24,122</b>	<b>24,291</b>	<b>22,781</b>	<b>140,499</b>
N_F20	3,635	4,510	8,552	8,164	9,369	9,104	43,334
Part_F20	15.85%	19.73%	36.37%	33.84%	38.57%	39.96%	30.72%
N_W21	2,116	2,910	6,873	5,641	6,740	6,851	31,131
Part_W21	9.22%	12.73%	29.23%	23.39%	27.75%	30.07%	22.07%
N_S21	61	68	154	215	359	355	1,212
Part_S21	0.27%	0.30%	0.66%	0.89%	1.48%	1.56%	0.86%

- Tables 10 through 13 show mean score changes within years across test subjects. Growth within year was calculated by comparing averages of two adjacent test administrations. For example, averages of the Winter and Spring admin scores are compared with the averages of mean scale scores from the Fall and Winter admins.

Table 10. Mean scale scores by test administrations and grade levels across years (Language Usage)

Year	Admin	Gr 3	Gr 4	Gr 5	Gr 6	Gr 7	Gr 8	Overall
2018-19	Fall 18	191.64	201.11	207.86	213.18	216.93	220.46	208.53
	Winter 19	198.76	206.02	212.12	215.54	218.35	220.90	211.95
	Spring 19	201.96	208.26	213.42	217.93	220.70	223.48	214.29
	Growth	5.16	3.58	2.78	2.37	1.89	1.51	2.88
2019-20	Fall 19	191.38	200.68	207.81	212.91	216.33	220.04	208.19
	Winter 20	199.06	206.12	211.87	215.30	218.00	221.36	211.95
	Spring 20	201.82	205.18	213.76	214.78	219.48	221.49	212.75
	Growth	5.22	2.25	2.97	0.93	1.58	0.72	2.28
2020-21	Fall 20	190.13	199.50	206.10	211.32	215.21	218.92	206.86
	Winter 21	197.58	204.68	210.37	213.35	216.55	220.35	210.48
	Spring 21	201.30	205.88	208.78	213.65	216.99	220.36	211.16
	Growth	5.58	3.19	1.34	1.17	0.89	0.72	2.15

Table 11. Mean scale scores by test administrations and grade levels across years (Reading)

Year	Admin	Gr 3	Gr 4	Gr 5	Gr 6	Gr 7	Gr 8	Overall
2018-19	Fall 18	190.09	199.89	207.41	212.70	216.29	219.81	207.70
	Winter 19	196.86	205.05	211.49	214.97	217.76	221.18	211.22
	Spring 19	199.93	207.10	212.48	216.28	218.28	221.33	212.57
	Growth	4.92	3.60	2.53	1.79	1.00	0.76	2.43
2019-20	Fall 19	190.43	200.30	207.45	212.60	216.47	219.61	207.81
	Winter 20	197.39	205.42	211.37	214.67	218.05	221.25	211.36
	Spring 20	200.94	205.26	213.77	217.49	222.18	225.45	214.18
	Growth	5.25	2.48	3.16	2.45	2.85	2.92	3.19
2020-21	Fall 20	189.57	199.39	206.61	212.14	215.99	219.66	207.23
	Winter 21	197.13	205.51	211.65	215.40	218.17	222.04	211.65
	Spring 21	200.29	205.01	210.21	218.79	220.73	224.92	213.32
	Growth	5.36	2.81	1.80	3.32	2.37	2.63	3.05

Table 12. Mean scale scores by test administrations and grade levels across years (Mathematics)

Year	Admin	Gr 3	Gr 4	Gr 5	Gr 6	Gr 7	Gr 8	Overall
2018-19	Fall 18	190.78	202.61	212.10	218.09	224.33	229.83	212.96
	Winter 19	198.64	208.07	217.26	221.95	226.45	231.73	217.35
	Spring 19	204.42	213.44	221.58	226.02	229.81	234.33	221.60
	Growth	6.82	5.41	4.74	3.97	2.74	2.25	4.32
2019-20	Fall 19	191.28	203.12	212.29	217.60	224.72	229.66	213.11
	Winter 20	198.98	208.57	217.32	221.44	227.22	231.80	217.55
	Spring 20	203.84	212.41	221.41	230.41	234.91	239.32	223.72
	Growth	6.28	4.64	4.56	6.41	5.09	4.83	5.30
2020-21	Fall 20	188.55	199.47	209.17	215.33	222.24	228.39	210.53
	Winter 21	197.76	207.13	216.16	220.82	226.60	232.45	216.82
	Spring 21	202.61	210.73	217.84	226.32	230.53	237.08	220.85
	Growth	7.03	5.63	4.33	5.49	4.15	4.35	5.16

Table 13. Mean scale scores by test administrations and grade levels across years (Science)

Year	Admin	Gr 3	Gr 4	Gr 5	Gr 6	Gr 7	Gr 8	Overall
2018-19	Fall 18	190.03	196.96	203.40	207.00	210.08	213.54	203.50
	Winter 19	193.78	199.56	206.44	207.92	210.95	214.36	205.50
	Spring 19	196.63	201.72	208.66	210.07	213.03	216.08	207.70
	Growth	3.30	2.38	2.63	1.54	1.47	1.27	2.10
2019-20	Fall 19	190.06	197.29	203.71	207.22	210.39	213.57	203.71
	Winter 20	194.36	200.09	206.82	208.77	211.55	214.76	206.06
	Spring 20	200.09	203.88	209.86	210.89	215.21	218.20	209.69
	Growth	5.02	3.29	3.07	1.84	2.41	2.32	2.99
2020-21	Fall 20	192.33	198.74	204.53	208.45	212.08	215.39	205.26
	Winter 21	196.85	202.40	207.99	210.22	213.67	216.81	207.99
	Spring 21	200.48	203.56	206.47	211.68	215.67	218.02	209.31
	Growth	4.07	2.41	0.97	1.61	1.79	1.31	2.03



- In Figures 2 through 5 changes within given academic year showed clear patterns; Most of the grade levels showed yearly growth throughout test administrations. As grade level increases, growth or growth rates decreases. It is also depicted that growth (or growth rates) decreased between Winter and Spring across years in lower grades (3<sup>rd</sup> through 5<sup>th</sup> and some 6<sup>th</sup> grade) comparing to 7<sup>th</sup> or 8<sup>th</sup> grades.

Some grade levels (e.g., 3<sup>rd</sup>, 4<sup>th</sup>, and 6<sup>th</sup>) in the Language Usage tests showed mean scale scores decrease between Winter and Spring admins in the 2019-20 academic year. Mean Reading scores for 4<sup>th</sup> and 5<sup>th</sup> grades between Winter and Spring admins in the 2020-21 academic year also showed decreases.

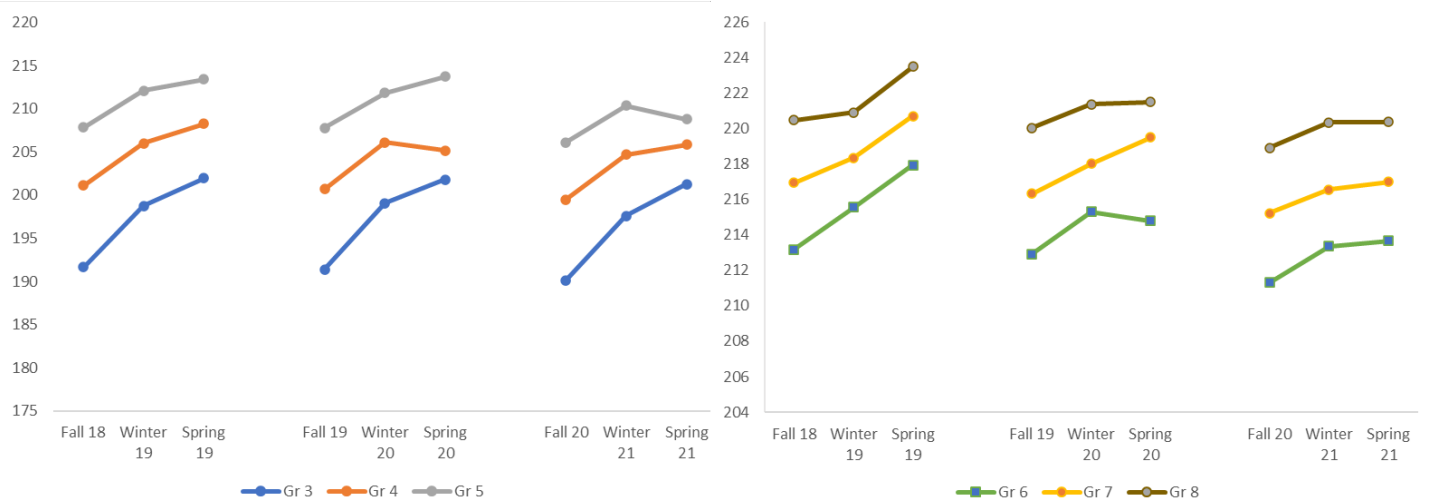


Figure 2. Mean scale scores changes (growth) across years for Language Usage tests

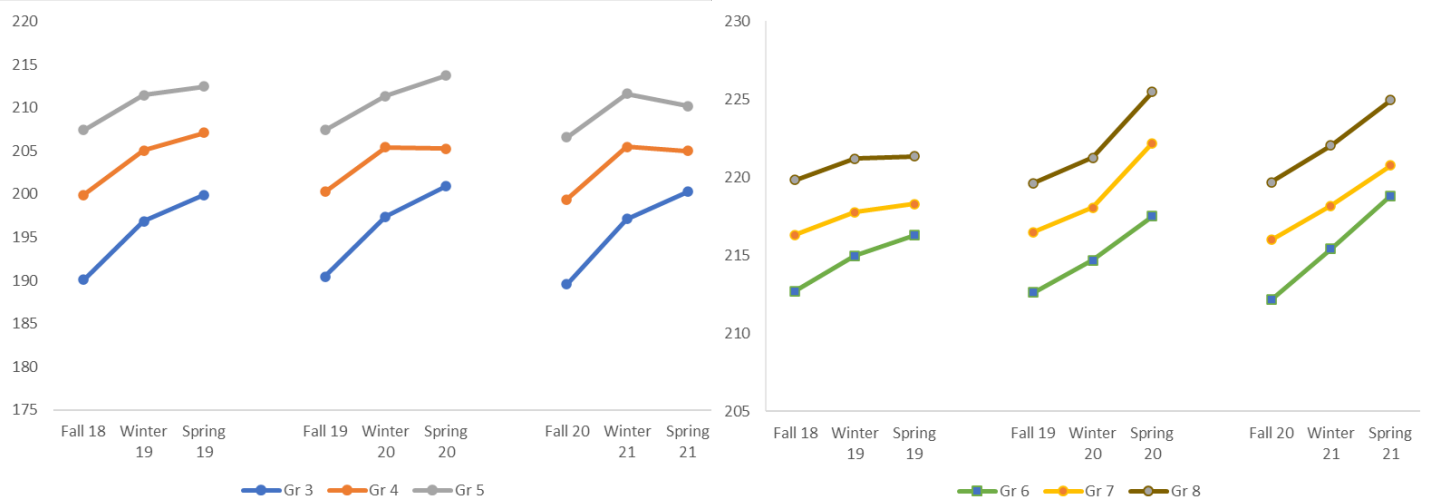


Figure 3. Mean scale scores changes (growth) across years for Reading tests

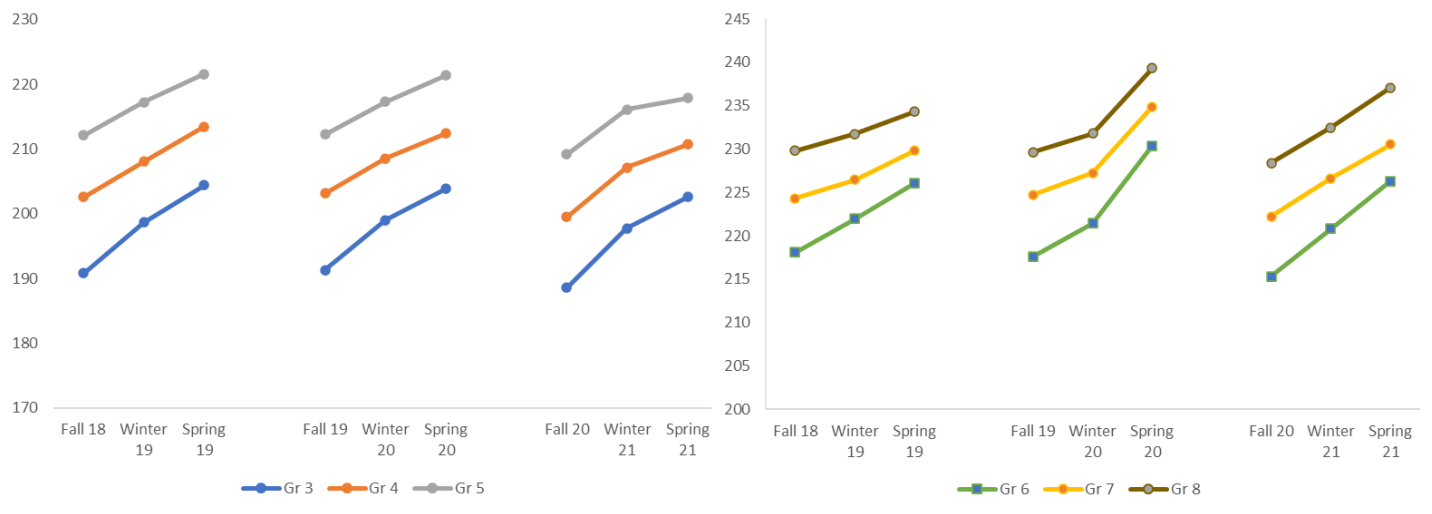


Figure 4. Mean scale scores changes (growth) across years for Mathematics tests

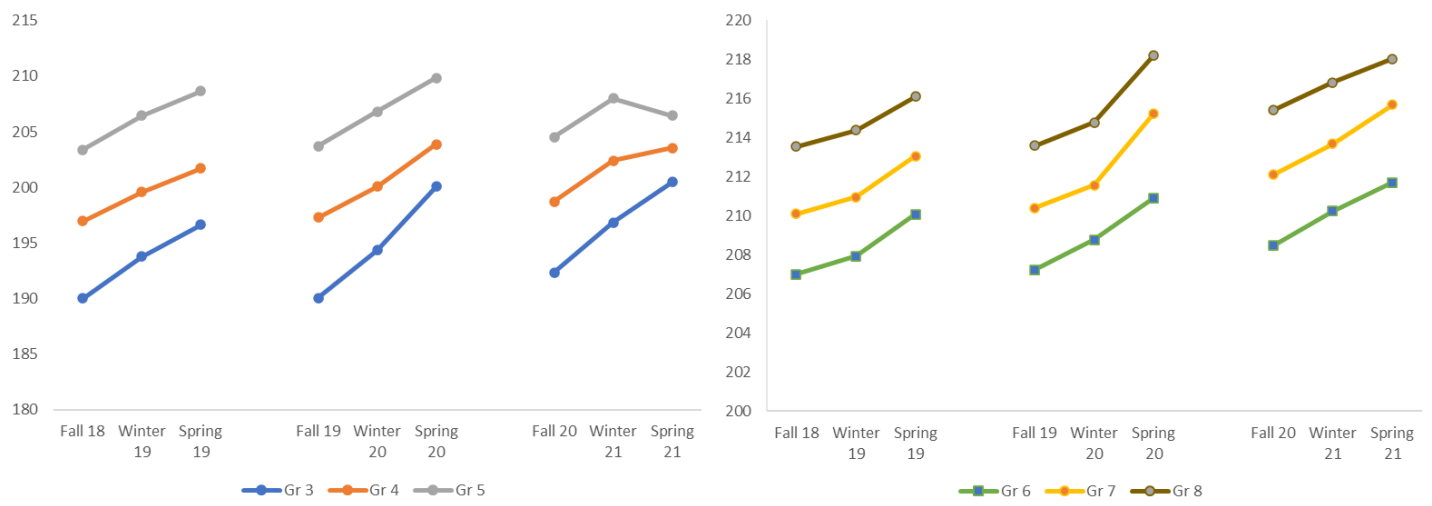


Figure 5. Mean scale scores changes (growth) across years for Language Usage tests