



**R-2 ACADEMIC ACHIEVEMENT - MATHEMATICS
SUMMARY OF COMPLIANCE STATUS
APRIL 2021**

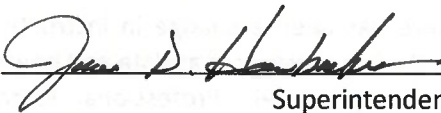
SUPERINTENDENT CERTIFICATION

With respect to R-2 *Academic Achievement – Mathematics* taken as a whole, the superintendent certifies that the proceeding information is accurate and complete, and the district is:

- Making Reasonable Progress
- Making Reasonable Progress, with Exception
- Failing to Make Reasonable Progress

Summary Statement by Administration

Monitoring of results policies is part of the ongoing process of district performance evaluation and superintendent evaluation. This report includes a Data Analysis on page 2 presenting an administrative summary of the data and a Capacity Building section on the last page outlining new practice or protocol to be utilized for the next reporting timeframe. The Capacity Building section also documents suggested changes to Operational Expectations or Results policies and/or indicators and interpretations. This report addresses nine indicators of the superintendent’s responsibility regarding Academic Achievement - Mathematics. Of the nine indicators, four demonstrated making reasonable progress, three demonstrated making reasonable progress, with exception, one indicator demonstrated failing to make reasonable progress, and one indicator was a baseline measurement. Reporting dates for this report are July 1, 2019 – June 30, 2020.

Signed: 
Superintendent

Date: 4/12/2021

SCHOOL BOARD ACTION

With respect to R-2 *Academic Achievement – Mathematics*, the Board:

- Accepts the report as making reasonable progress
- Accepts the report as making reasonable progress, with exceptions
- Finds the district failing to make reasonable progress

Summary statement/motion of the Board

Motion by Mr. Lee to accept the R-2 *Academic Achievement – Mathematics* Monitoring Report as Making Reasonable Progress, with Exception, seconded by Mr. Sagsveen. Motion carried

Signed: 
Board President

Date: 4/12/2021

Data Analysis by Administration

This section provides readers a summary of the data they are about to review.

**There was a significant impact on data and our instructional conversations when we moved to distance learning due to COVID. Specifically, COVID assessment and grading conversations attempted to address how to reliably assess learners, especially younger learners, in virtual environments in ways that depict accurate, individual representations of a student’s knowledge, skills, and understandings while factoring in the home-learning environment and the varied type and amount of supports provided to students from home. As a result, in some instances, teachers were forced to rely upon proficiency check-points or standards-assessment data from earlier in the year. Additionally, an emphasis was put in place to maintain and increase strategies for engaging students during impromptu distance learning through prioritizing attendance, engagement, and homework completion as the desired outcomes over testing and formal assessments.

The number of scores entered and standards assessed were not consistent with typical practices during in person learning. The standardized data that we do have available from the 19-20 school year is not comparable to prior data due to no spring assessment. These factors make it very difficult to compare 19-20 data to prior years.

The majority of the data indicates making reasonable progress with exceptions. We are consistently meeting or exceeding the state average in ACT. MAP proficiency and growth is more of a midyear check. Typically MAP data in the spring is reflective of an additional twelve to sixteen weeks of instruction, compared to our Winter data which is shown below. Typical MAP growth nationally is overall 50%. Many grade levels and subgroups are meeting or exceeding the typical national growth. Looking at the 18-19 school year, the majority of subgroups met or exceeded average national growth.

While our data visually does not show growth in all areas, there has been a change in instructional practices. Conversations around building our body of evidence and what constitutes as data and how this impacts instruction has evolved as a result of distance learning model. Professional learning conversations have revolved around effective grading and assessment practices. As we continue to refine and align our instructional, grading, and assessment practices, we will see improvement in our data trajectory.

The evidence below supports making reasonable progress with exceptions as it reflects improvement in the majority of indicators. There are a couple areas of note from the overall results. There are some discrepancies in MAP Growth for certain subgroups. On average, African American, American Indian, economically disadvantaged, and students with disabilities subgroups are performing seven to ten percent lower compared to Caucasians. Data indicates we are failing to make reasonable progress in the area of standards based grades. Eight of nine grades have dropped compared to the prior year. This data is greatly influenced by the number of assignments entered and how the score is calculated, which is determined per teacher at this time. A highlight is that around half of our students are taking courses above and beyond the minimum requirement for graduation.

R-2.1 Academic Achievement – Mathematics

This section provides readers a summary of the data they are about to review.

Each student will meet or exceed targeted growth and proficiency using critical and creative thinking.

Each Student Will:

<p>2.1 Achieve targeted growth and proficiency in the following disciplines: ELA Mathematics Science Social Studies</p>	<p>Making Reasonable Progress, with Exception</p>
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2.1 Mathematics

Superintendent Interpretation:

- **External assessments** include assessments with national norms that are administered within specified windows as a part of state requirements.
- **Proficiency** means meeting or exceeding the knowledge and skill requirements of the specified measure.
- **Grade level target** on the NWEA (MAP) assessment is considered 50th percentile or higher.
- **Proficiency** on the NDSA is considered performing at or above grade level.
- **Proficiency** in the standards means that students have demonstrated that they know, understand, and are able to apply knowledge and skills at the “proficient” level of district proficiency scales.
- **Proficiency** is defined as “College Ready” on the ACT Aspire and ACT which is based upon the following percentiles and ACT cut scores. This score is an indication of the extent to which they are prepared for college-level work. The ACT consists of curriculum-based tests of educational development in English, mathematics, reading, and science designed to measure the skills needed for success in first-year college coursework.
- **Cut Score** is the minimum score needed on the ACT per subject-area to indicate a 50% chance of obtaining a B or higher or about a 75% chance of obtaining a C or higher in the corresponding credit-bearing college courses.

Minimum Expected Percentile				
	English	Math	Science	Reading
Aspire Grade 9	44	74	79	71
Aspire Grade 10	47	84	75	75
ACT	42	63	70	60
Minimum ACT Cut Score				
ACT	18	22	23	22

- **Targeted growth** is the expected growth defined by national norms on a particular assessment. National data indicates that 50% of students typically meet their expected targeted growth.

- **Minimum requirements** include BPS graduation expectations for high school and core courses in K-12.
- **Critical and creative thinking** refers to the success skills which include critical thinking, creativity, collaboration, and communication. Done well, students will collect, assess and analyze relevant information, reason effectively, reflect critically on learning experiences, use a wide range of idea creation techniques to create new and worthwhile ideas, work collaboratively in teams for sustained periods of time to develop high quality products, and communicate ideas through the creation of authentic products using a combination of words, data, and visual representations to inform, persuade and entertain others.
- **Routine application** means evidence (e.g. elect/classroom observation data, survey data, Danielson, ND DPI student engagement survey (ESSA), Advanced Ed survey data) indicates that critical and creative thinking is a clearly understood and regular part of the classroom environment.

Green	Met or Increased
Blue	Flat or Decrease Under 2%
Yellow	Decrease of 2% to 4.9%
Red	5% or More Decrease

Indicator 1: Each student will show continuous improvement toward, or attainment of a target so that at least 80% of all students are considered proficient in each grade level assessed on the NDSA in the area of mathematics	Making Reasonable Progress, with Exception
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Evidence:

Grade	Target	Spring 15-16	Spring 16-17	Spring 17-18	Spring 18-19	n	Spring 19-20
3	80%	49%	51%	55%	62%	No data due to COVID	
4	80%	49%	47%	52%	48%		
5	80%	39%	40%	45%	55%		
6	80%	41%	35%	41%	47%		
7	80%	38%	36%	41%	39%		
8	80%	33%	32%	43%	45%		
11	80%	44%	33%	*33%	*30%		

*17-18, 18-19 the ACT was used as the 11th grade NDSA Assessment

Indicator 2: Each student will show continuous improvement toward, or attainment of a target so that at least 80% of all students are considered at grade level target on the NWEA (MAP) assessment in the area of mathematics.	Making Reasonable Progress
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Evidence:

Grade	Target	n	Spring 16-17	n	Spring 17-18	n	Spring 18-19	n	Winter 19-20
2	80%	969	60.5%	958	54.9%	997	53.0%	995	55.1%
3	80%	1007	61.9%	955	61.5%	954	61.6%	991	55.9%
4	80%	984	56.8%	1015	59.0%	973	58.0%	972	57.2%
5	80%	994	58.8%	995	56.9%	1038	57.7%	1002	56.9%
6	80%	921	54.5%	987	54.8%	1006	52.0%	1063	52.5%

7	80%	905	60.0%	919	58.9%	996	58.5%	1023	54.6%
8	80%	874	65.2%	912	65.8%	905	63.3%	1021	59.8%

Cohort Data:

Grad Class of	Target	n	Spring 16-17	n	Spring 17-18	n	Spring 18-19	n	Winter 19-20
2030	80%							872	57.9%
2029	80%					858	54.8%	847	58.9%
2028	80%			820	56.8%	836	62.2%	814	58.0%
2027	80%	850	63.1%	818	65.5%	806	62.2%	797	61.0%
2026	80%	834	63.7%	800	61.3%	797	61.1%	783	56.3%
2025	80%	803	59.1%	782	59.3%	773	54.2%	771	57.5%
2024	80%	771	63.0%	747	58.8%	737	61.5%	715	64.9%

Indicator 3: Each student will show continuous improvement toward, or attainment of a target so that at least 60% of all students will meet their expected targeted growth in each grade level assessed on the NWEA (MAP) in the area of mathematics.	**Making Reasonable Progress, with Exception
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Evidence:

Grade	Target	n	Fall to Spring 16-17	n	Fall to Spring 17-18	n	Fall to Spring 18-19	n	**Fall to Winter 19-20
2	60%	518	40.4%	455	39.1%	310	44.8%	995	42.4%
3	60%	1006	52.3%	953	52.1%	954	58.1%	991	44.4%
4	60%	982	43.8%	1015	48.3%	973	49.1%	972	43.5%
5	60%	994	50.3%	993	53.3%	1038	50.8%	1002	49.4%
6	60%	920	56.5%	983	55.8%	1006	54.6%	1063	48.8%
7	60%	903	57.4%	919	61.3%	996	60.5%	1023	47.5%
8	60%	873	64.4%	911	65.2%	905	61.3%	1021	52.3%

Indicator 4: Each student will show continuous improvement toward, or attainment of a growth target so that at least 60% of all students categorized into subgroups (Low SES; race, gender, exceptional above and below), will meet their expected targeted growth in each grade level assessed on the NWEA (MAP) in the area of mathematics.	**Making Reasonable Progress, with Exception
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Evidence:

Disaggregated subgroups:	Target	n	Spring 16-17	n	Spring 17-18	n	Spring 18-19	n	Winter 19-20
Economically Disadvantaged	60%	1523	47.3%	1490	51.3%	1512	48.9%	1753	44.5%
African American	60%	266	47.0%	279	50.2%	274	47.5%	359	44.3%
American Indian	60%	494	45.3%	531	49.9%	534	47.0%	612	42.3%
Asian	60%	66	54.6%	69	59.4%	75	58.7%	70	54.3%
Caucasian	60%	5466	53.4%	5368	55.1%	5269	56.1%	5779	47.6%
Hispanic	60%	163	47.2%	158	51.3%	151	51.0%	183	45.4%

Students w/ Disabilities	60%	761	45.5%	744	47.3%	778	48.2%	829	41.7%
EL	60%	77	57.1%	116	65.5%	134	58.2%	187	40.6%
Female	60%	3202	50.9%	3157	54.1%	3105	55.6%	3422	45.6%
Male	60%	3294	53.7%	3283	54.8%	3247	54.2%	3645	48.2%
Gifted	60%	310	51.0%	121	62.0%	148	58.1%	95	53.8%
Title 1/District Support Services	60%					747	48.3%	1647	44.9%

Indicator 5: Each student will show continuous improvement toward, or attainment of a target so that at least 80% of students are considered proficient in each grade level assessed on the ACT Aspire in the area of mathematics.	**Making Reasonable Progress
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Evidence:

Grade	Target	n	Spring 16-17	n	Spring 17-18	n	Spring 18-19	n	Winter 19-20
9	80%	912	41.9%	908	47.8%	923	52.0%	No Data Due to COVID	
10	80%	856	37.5%	874	38.7%	884	42.9%		

Indicator 6: The district mean scores will match or exceed the state mean score on the ACT in the area of mathematics.	Making Reasonable Progress
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Evidence:

Year	Number of Students Tested		Math	
	District	State	District	State
2016	849	7379	20.2	20.3
2017	834	7399	20.3	20.4
2018	827	7282	20.1	20.3
2019	845	7451	20.0	19.9
2020	871	7418	19.6	19.6

Indicator 7: Each student will show continuous improvement toward, or attainment of a target so that at least 80% of students are proficient in grade level mathematics standards.	**Failing to Make Reasonable Progress
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Evidence:**Proficiency = 3.0**

Grade	Target	n	Spring 16-17	n	Spring 17-18	n	Spring 18-19	n	Spring 19-20
K	80%	1027	41.7%	1019	42.7%	1061	30.8%	1096	16.2%
1	80%	1033	46.5%	1014	37.6%	1032	29.6%	1075	13.6%
2	80%	1032	48.0%	996	35.2%	1017	26.7%	1042	19.2%
3	80%	1082	20.1%	1018	18.1%	1002	15.6%	1037	9.2%
4	80%	1037	24.0%	1080	24.8%	1026	16.3%	996	7.5%
5	80%	1052	24.8%	1039	21.8%	1085	16.7%	1026	15.5%

6	80%	895	30.1%	946	30.8%	982	31.7%	1012	31.7%
7	80%	911	16.0%	906	12.4%	951	16.0%	962	10.1%
8	80%	715	39.3%	689	48.5%	725	45.8%	744	35.3%

Proficiency = 2.75

Grade	Target	n	Spring 16-17	n	Spring 17-18	n	Spring 18-19	n	Spring 19-20
K	80%	1026	62.9%	1014	60.9%	1061	53.8%	1096	33.9%
1	80%	1031	67.2%	1010	65.6%	1031	54.1%	1075	29.4%
2	80%	1028	69.1%	995	56.2%	1017	50.2%	1042	36.3%
3	80%	1080	36.0%	1016	35.3%	1002	31.5%	1037	24.0%
4	80%	1036	42.2%	1075	44.6%	1026	34.6%	996	18.8%
5	80%	1051	48.4%	1038	42.0%	1085	34.7%	1026	33.3%
6	80%	892	45.2%	945	44.9%	982	45.6%	1012	46.6%
7	80%	910	30.7%	903	24.7%	950	29.4%	962	27.7%
8	80%	713	55.4%	689	57.9%	724	56.1%	744	53.0%

Proficiency = 2.5

Grade	Target	n	Spring 16-17	n	Spring 17-18	n	Spring 18-19	n	Spring 19-20
K	80%	1026	78.6%	1014	75.9%	1061	70.1%	1096	55.4%
1	80%	1031	81.9%	1010	81.6%	1031	72.0%	1075	49.2%
2	80%	1028	81.0%	995	71.9%	1017	68.6%	1042	55.2%
3	80%	1080	55.1%	1016	55.9%	1002	52.3%	1037	44.6%
4	80%	1036	64.7%	1075	66.3%	1026	57.0%	996	42.1%
5	80%	1051	69.7%	1038	65.7%	1085	58.7%	1026	57.6%
6	80%	892	63.3%	945	65.3%	982	63.0%	1012	65.4%
7	80%	910	55.5%	903	45.5%	950	54.2%	962	50.8%
8	80%	713	71.8%	689	72.6%	724	72.5%	744	66.5%

Indicator 8: At least 40% of all students are participating in courses that promote college and career readiness specific to mathematics beyond minimum requirements.	Making Reasonable Progress
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Evidence:

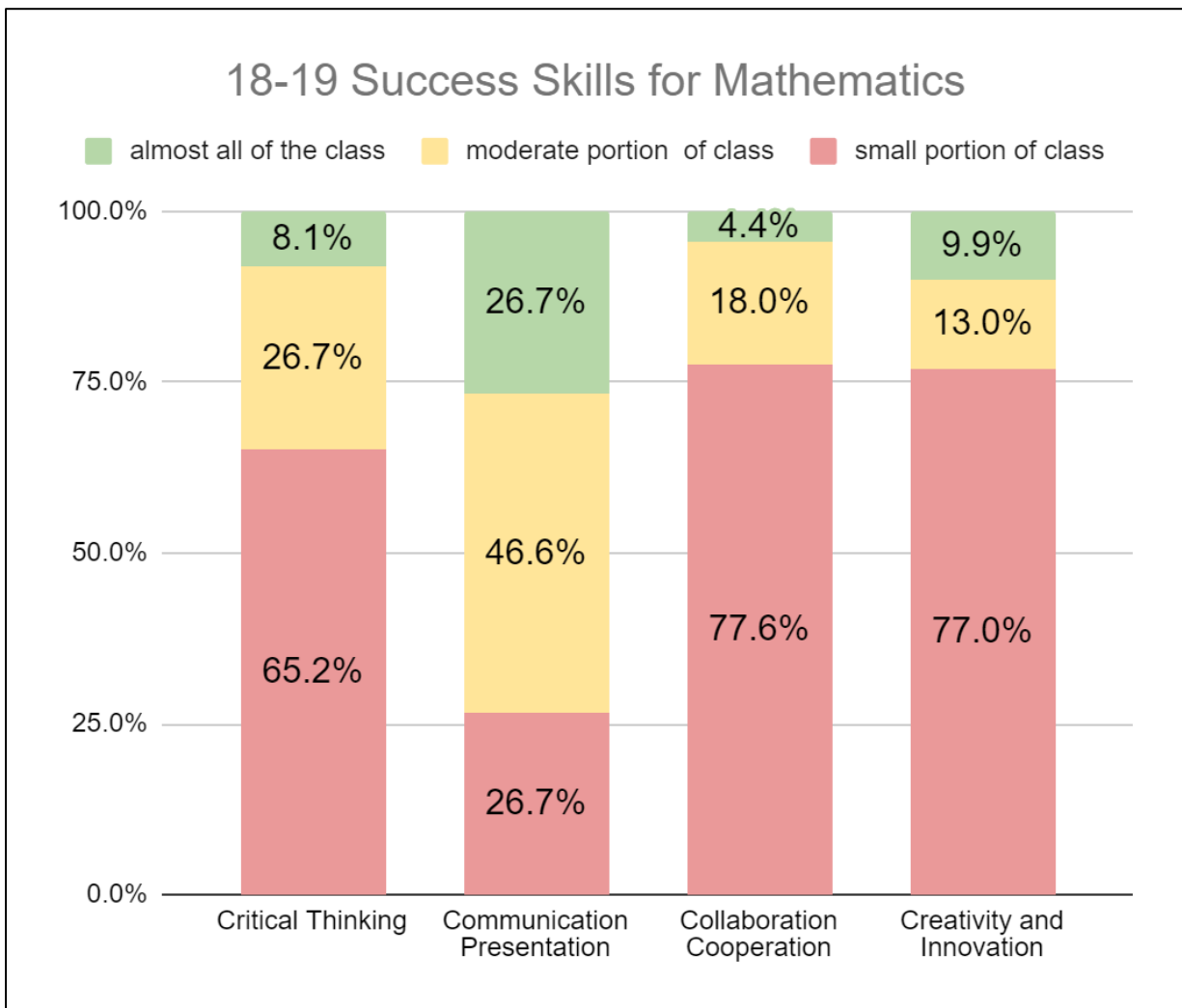
Grade	Target	n	Spring 16-17	n	Spring 17-18	n	Spring 18-19	n	Spring 19-20
12	40%	854	55.1%	858	52.2%	884	52.3%	919	49.4%

Indicator 9: Students will report and show continuous improvement toward, or attainment of, a target so that at least 80% of students are routinely applying critical and creative thinking in Mathematics.	A new baseline will be developed for the 2021-2022 school year
Evidence: For 2021 and beyond, a team of teacher leaders and district staff are currently engaged in a process of creating our district portrait of a graduate and will create student and staff survey questions that will be used to gauge progress on student learning behaviors that illustrate the use of	

creativity, critical thinking and other success skills as it relates to relevant learning. This data will replace the Student Inventory survey and ELEOT data moving forward.

2018-2019 Evidence: *Eleot (The Effective Learning Environments Observation Tool) is a learner-centric observation tool that measures and quantifies student learning behaviors. In the chart below, Red (small portion of class) indicates that less than 50% of students observed during those particular observations were observed applying the item and that the quality of application was routine and of moderate to high complexity. Yellow (moderate portion of class) indicates that between 50% - 79% of students were observed applying the item and that the quality of application was routine and of moderate to high complexity. Green (almost all of the class) indicates that between 80% -100% of students were observed applying the item and that the quality of application was routine and of moderate to high complexity.*

Overall, across observations of students engaged in Mathematics, 8.1% of the classroom observations illustrated that at least 80% of the students were observed to be applying critical thinking. Additionally, 9.9% of the observations found that at least 80% of students were observed to be applying creative thinking. The total number of observations in Mathematics = 162.



Capacity Building

This section provides new inputs by administration placed into practice or protocol since this data was collected.

Input by Administration

A couple notable recent inputs into the area of Math include but are not limited to:

Curriculum (Pre-K- 5)

- Distance learning digitized math lessons will be organized and available for future student and staff use
- K-5 Math Curriculum Review Teams with representation from each elementary school and all grade levels (year 2)
- Development and revision of proficiency scales for prioritized standards K-5
- Piloting the use of the revised Proficiency Scales within K-5 classrooms

Curriculum- (6-12)

- 6-12 Math Core Guiding Teams established representing teachers in all buildings
- TransMath resource upgrade third edition for 6-8 students enrolled in Transition Math
- 7th grade resource pilot to upgrade digital version to increase feedback and differentiation

Instruction

- Supplementing Tier 1 instruction with Dreambox K-8 district-wide
- Created Core Math Block Components K-5 to be implemented 2021-2022
- Streamlining Interventions across general ed and special education departments
- Piloting different math interventions: Spring Math, Math Fluency Tool Kit
- Monthly meetings with K-5 District Curriculum Specialists and Math Interventionists to support instruction, training, and personal math growth

Professional Development Opportunities

- Minds on Math: 2 differentiated online courses and coaching support to support application of strategies by teachers who have attended Minds on Math in the past
- Fraction Trainings with specific coaches who are working on math goals within their building
- Spring Math consultation for coaches and math strategies teachers
- K-5 Winter 2021 "Revisiting Standards Based Teaching & Learning" training to 100% classroom teachers & specialists

While not executed this year due to COVID & substitute availability, we have the formation of elementary professional learning pathways for teachers that are more deconstructed, specific in nature, and timed appropriately to reflect instructional delivery and pacing compared to years' past such as:

- Building a Rich Math Block
- Conceptually Understanding and Teaching Fractions
- Conceptually Understanding and Teaching Addition and Subtraction
- Conceptually Understanding and Teaching Multiplication and Division
- Math Interventions in the K-8 Classroom

Other Highlights

- K-12 Math Steering Committee

Suggested Changes by Administration

2.1 Mathematics

Superintendent Interpretation:

Routine application means evidence ~~(e.g. e-leot/classroom observation data, survey data, Danielson, ND DPI student engagement survey (ESSA), Advanced Ed survey data) indicates that critical and creative thinking is a clearly understood and regular part of the classroom environment~~ from classroom observation, curricular and student work artifacts, and/or survey data indicate that critical and creative thinking is a clearly understood and regular part of the classroom environment.

Superintendent Indicator of Compliance:

Indicator 11: Students will report and show continuous improvement toward, or attainment of, a target so that at least 80% of students are routinely applying critical and creative thinking in Mathematics.	
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Rationale: The changes to the superintendent interpretation section includes language that is not specific to programs or companies. The identification of specific programs or companies creates conditions for frequent changes within Coherent Governance policy. The new language captures the exact same intent and provides for longitudinal data for the district, board, and community.