What third grade shows about the opportunity to learn

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NAACP Anchorage Education Committee

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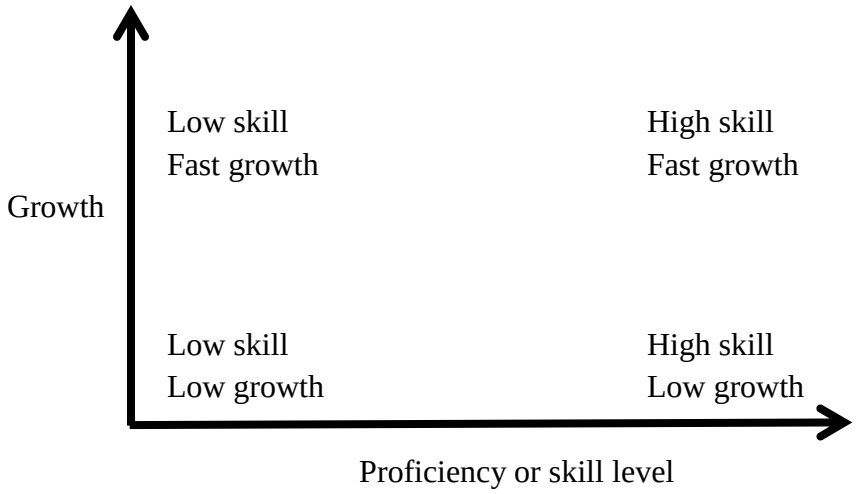

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Schools are commonly judged by their academic scores. Indeed, Judge Gleason in *Moore vs. Alaska* (2007)[1] ruled that a substantial majority of students scoring proficient is a key sign that legislators have met their constitutional duty to provide adequate public schools.

Often overlooked, however, is her ruling that legislators also must create a meaningful opportunity for every child to learn to the state standards. Judge Gleason wrote, "The education clause requires the state to take ultimate responsibility for insuring that each child in this state is accorded a meaningful opportunity to achieve proficiency in reading, writing, math, and science," (*Moore vs. Alaska*, page 176). She also wrote "The education clause requires …a meaningful opportunity to meet the state's standards," (*Moore vs. Alaska*, page 181). The judge ruled that "The state must also insure that its educational standards are being implemented at the local level so that all children within the state receive their constitutional entitlement to the opportunity for an adequate education" (*Moore vs. Alaska*, page 186). She did not make the legislature's opportunity-to-learn duty contingent on state funds, the child, the family, or the community. Nevertheless, the legislators' duty to provide opportunity to each child has been largely overlooked in the debate about whether public schools are legally adequate.

Studies outside of Alaska have examined relationships between academic growth and proficiency.[2,3] They found that within a particular grade level, higher growth generally accompanies higher proficiency. Across grade levels, growth rates decline as proficiency increases.[4] Others have examined opportunity to learn as indicated by growth.[4]

This paper reveals by way of Anchorage third grade examples that growth rates are not great enough to let most students become proficient. Taking growth as an outcome of opportunity, this paper looks at growth in a new way. Measures of academic growth show how opportunities to learn are not adequate for most children to achieve the state's math and English language arts performance standards. Expanded per-pupil instruction is suggested for expanding the opportunity to learn.

Methods

The data come from the Anchorage School District's Measures of Academic Progress (MAP)[5,6] and DIBELS early literacy screener, and the state Department of Education's performance standards assessments.[7] The graphs and tables are work products of the education committee of the National Association for the Advancement of Colored People, Anchorage Branch. Correlations were calculated by Spearman's non-parametric method that do not assume normality.

Results

Third grade measures of progress and proficiency

Reading growth in third grade varied among Anchorage schools more than three-fold in 2023-2024; math growth varied four-fold (Figures 1 to 5). Table 1 shows those MAP averages and norms. In third grade, 1 year's average growth in reading yielded an approximately 10-point difference. In math 1 year's growth was indicated by an approximately 12-point difference.

Among schools overall, higher third grade reading growth was surprisingly associated with lower proficiency (Figures 1 and 3). Reading growth declined three-fold as schools' reading proficiency increased. Schools with the best combination of growth and proficiency in the fall were three neighborhood schools, as illustrated in the upper quadrant of Figure 3, which was the least populated quadrant. Three of five charter schools there reported high proficiency but inferior growth. For example, half of the Anchorage schools exceeded Aquarian charter's third grade growth which was near average.

Eagle Academy charter school had the highest proficiency but low growth. In contrast, schools with the lowest proficiency reading scores were characterized by the fastest growth.

Table 1. Average scores among schools on Measures of Academic Progress[2] for third grade. The national norms are shown in the first line.[3] Anchorage School District data are for the 2023-2024 year, with 64 schools' reading averages and 63 schools' math averages representing approximately 3,000 students. Terms are rounded. Not reporting are AK Choice Virtual Learning, Family Partnership Correspondence School and Frontier Charter home-schooling programs.

	Reading			Math		
Reporting third grade MAP	RIT score average & SD in fall	RIT score average & SD in spring	Average growth & SD, fall to spring	RIT score average & SD in fall	RIT score average & SD in spring	Average growth & SD, fall to spring
NWEA (2020) students	187±17	197±16	10.5±2.1	188±13	201±14	12.6±2.1
ASD schools	185±8.4	194±5.6	9.0±4.0	184±7.4	196±8.7	12.3±3.4
ASD non-charters	185±8.1	193±5.2	8.7±3.7	184±6.9	196±8.0	12.1±3.3
ASD five charters	188±12	200±7.5	12.5±6.1	188±12	203±14	15.1±3.6

NWEA achievement RIT score average is the national norm for students, not schools. ASD entries are averages of school averages, not student averages.

Although their averages resembled the national norms on Measures of Academic Progress, many Anchorage schools nevertheless placed a year or more behind them in 2023-2024. Thirty one percent of the schools (20 out of 64 reporting schools) had third grade fall average reading scores placing closer to the second grade 2020 national student fall norm 172.4 than to the third grade norm 186.6. Forty four percent of the schools (28 out of 63 reporting schools) had third grade fall average math scores closer to the second grade national student norm 175.0 than to the third grade norm 188.5. A handful of schools' average third grade fall scores even placed below the national student norms for second grade (Figure 4). Figures S1 and S2 show homeroom sizes. Figures S3 and S4 display the numbers of Anchorage schools below the national norms for students.

Math growth had an opposite, weaker and positive association between growth and proficiency after a year of instruction (Figures 2 and 5). Math growth among schools improved with fall proficiency.

Winterberry charter school, with the highest growth rate but a low proficiency among third-graders, reported that it waits to begin reading instruction until third grade. Family Partnership correspondence reported results for only 20 percent of its students, and was omitted from the graphs.

Some schools, both neighborhood and charter, had low growth together with low proficiency (Table 2). Others, both neighborhood and charter, had both high growth and high proficiency (Table 3).

In addition, some schools stood out with low entering proficiency followed by superior growth. Table 4 lists "Mighty Might" schools having low fall proficiency scores but followed by fast growth. Two of the schools earned that distinction in both reading and math. Such schools, called "gap busters" by the Stanford University study of Raymond et al. (2023), provided the largest added value overall among more than 60 schools' third graders.

Percentages of poor students and English language learners predicted reading growth. See the positive relations in Figures 6 and 7. As the proportion of students eligible for free or reduced price lunch (i.e., poor students) increased, so also did the average reading growth of the schools' third graders. Similarly, as the proportion of the students in the schools who were English language learners increased, so did the average reading growth of the schools' third graders.

In contrast to reading, the percentages of poor students and English language learner students had little association with growth in math during third grade. See Figures 8 and 9.

Table 2. Anchorage School District schools where third grade Measures of Academic Progress[2] results for 2023-2024 fell both below average growth scores and below average proficiency scores at the end of the school year. Bold denotes schools appearing in both the reading and the math columns.

Reading	Math	
< 9.0 points mean growth & < 193.8 points mean spring proficiency	< 12.3 points mean growth & < 196.4 points mean spring proficiency	
Baxter	Airport Heights	Muldoon
Campbell STEM	Alaska Native Culture Charter	Northwood
Fire Lake	**Baxter**	Nunaka
Homestead	**Campbell STEM**	**Polaris**
Kasuun	Chester Valley	Ptarmigan
Lake Otis	College Gate	Spring Hill
Polaris	Creekside	Taku
Turnagain	Denali Montessori	Tudor
Wonder Park	**Fire Lake**	**Turnagain**
	Klatt	Tyson
	Lake Hood	Ursa Minor
	Lake Otis	

Table 3. Anchorage School District schools whose third grade Measures of Academic Progress[2] results for 2023-2024 exceeded both the average growth score and the average year-end proficiency score. Bold denotes schools appearing under both the reading and the math columns.

Reading	Math	
≥ 9.0 points mean growth & ≥ 193.8 points mean proficiency in spring	≥ 12.3 points mean growth & ≥ 196.4 points mean proficiency in spring	
Aquarian charter	**Aquarian charter**	**Ocean View**
Bowman	Aurora	**Orion**
Denali Montessori	Bayshore	Ravenwood
Eagle River	Bear Valley	Rilke Schule charter
Gladys Wood	**Bowman**	Rogers Park
Government Hill	Eagle Academy charter	Sand Lake
Ocean View	**Eagle River**	Scenic Park
Orion	**Gladys Wood**	Trailside
Winterberry charter	Huffman	
Ursa Minor	Kincaid	

Table 4. Mighty Might schools, the "gap-busters" for value-added reading and math gains. Mighty Might schools were those starting the school year with the lowest scores on third grade Measures of Academic Progress[2] in 2023-2024 but then followed with the biggest gains. The gains between September starting scores and April ending scores were one-and-a-half times larger than ASD schools' average third grade growth. ASD's average fall scores were 174 reading points and 180 math points, respectively. Among the Mighty Might schools, two in bold stand out for their outsized growth in both reading and math.

	RIT fall score	Mighty Mites growth points
Reading >15 pt growth after <174 score		
Lake Hood	170.4	14.9
Mountain View	171.5	15.0
Northstar	173.8	14.7
Taku	172.3	15.0
Tyson	172.5	15.2
Math >15 pt growth after <180 fall score		
Mountain View	175.7	16.8
Northstar	177.3	17.5
Russian Jack	179.7	15.5
Wonder Park	177.7	15.9

In only 15 percent of elementary schools (9 out of 62) did a majority of third graders score proficient or better in the English language arts state standard. On the state assessment for English language arts, third graders with faster reading growth on Measures of Academic Progress generally performed worse than third graders in schools with slower growth (Figure 10). Third graders above average in reading growth generally comprised a majority of schools not meeting the state proficiency standard. Only schools with third graders having slower than average growth managed a majority of students meeting the proficiency

standard. Only in a single school did third graders both show above average growth and manage more than 50 percent scoring proficient or better on the state English language arts standard. Even the fastest growth rates, about 1-1/2 years of growth in 1 year, were not accompanied by more than 50 percent of students scoring proficient or better on the state assessment.

In contrast, in the state standard assessment for math, the schools with faster growth generally performed better than schools with slower growth (Figure 11). Nevertheless, in only 18 out of 60 elementary schools (30 percent) did a majority of third graders score proficient or better in math on the state standard assessment. Even among the schools with above-average third grade growth, only 56 percent (14 out of 25) managed for a majority of their third graders to score proficient or better on the state math standard. Eleven schools managed higher-than-average math growth but did not manage for a majority of their third graders to score proficient or better on the state math standard.

Fall scores were better than growth in predicting state assessments performance. For both English and math standards, the partial correlation coefficients of determination for average percent of students proficient on the assessments and average fall scores ($r^2_{ELA\ \text{scores}} = 0.9$; $r^2_{math\ scores} = 0.9$) were larger than for growth ($r^2_{ELA\ growth} = 0.3$; $r^2_{math\ growth} = 0.8$, $p < 0.01$).

Overall, students placed 1 year of learning behind the state standards by the end of third grade. Correlations between spring MAP scores and the percentage of students proficient or better on the state standards were $r \geq 0.95$ ($p < 0.01$), showing that school average MAP scores are strong predictors of performance relative to the standards (Figures 12 and 13). For a substantial majority of students (i.e., 60 to 70 percent) to achieve at standards would involve doubling the percentages of students who were proficient from 31 percent and 35 percent in English language arts and math in 2024, respectively. Those higher percentages would involve increases of 11 MAP score points for reading and 13 for math, respectively, which reflect about 1 year's worth of additional learning.

Elementary screeners and standards

The school district's Amplify mClass DIBELS 8th edition early literacy screener results suggest that students experienced dramatic reading growth in kindergarten and first grade in 2023-2024. Seventy five percent of entering students fell below the benchmark. However, by year-end most had exceeded it, gaining far more than 1 year of learning (Fig. 14). For example, the percentage "well below" benchmark shrank from 56 percent to 23 percent in their kindergarten year.

By third grade, students generally did as well against their fall benchmark as they did against their spring benchmark in 2023-2024. That may indicate that their growth was generally 1 year of learning in 1 year regardless of rank.

The third grade reading screener results were somewhat predictive of results on the state English language arts assessment taken about the same time. Half the variation in the screener results could be explained statistically by the screener results variation (Fig. 15. $r = 0.7$, $p < 0.01$).

Nevertheless, a high screener rank did not necessarily mean proficiency on the state standard for English language arts. The percentage of third graders scoring at or above the screener benchmark in spring of 2024 (61 percent) was twice the percentage of schools' third graders averaging proficient or advanced on the state assessment for the English language arts standard (31 percent) given at about the same time.

Over the three years of the AK STAR state assessment in English language arts, 2022 to 2024, an average 29 percent of Anchorage third graders' schools scored proficient or better. That is less than half of the "substantial majority" discussed in *Moore vs. Alaska.* Indeed, the percentage of third graders' schools scoring above the literacy screener benchmark would have to double to about 80 percent if the results were to predict that more than 60 percent of students proficient on the English language arts assessment.

After third grade, elementary students' scores steadily improved against the English language arts standards, peaking in sixth grade (Fig. 16). The three-year average percentage of students scoring

proficient or better improved by about half, rising from 29 percent to 43 percent between third and sixth grade. In spite of that growth, even the peak performance seen in sixth grade was only 2/3 or less of the performance necessary for a "substantial majority" to achieve to the state standard.

The drop in performance beyond sixth grade was accompanied by an average three- to four-pupil increase in pupil-teacher ratios among the higher grades. The ratios, indices of class sizes, were reported by the Anchorage School District's adopted budgets.

Considered together, the early literacy screener and the state assessments suggest the English language growth rate through elementary school. Among the youngest students, most entered school well short of their benchmarks. Overcoming some of the shortfall, the students apparently grew quickly until third grade and then improved in the state assessments until sixth grade. However, most students' proficiency still fell short of the state standard even at peak performance at the end of elementary school. On average, students entered so far behind benchmarks that even significant growth in reading during elementary school did not let them achieve to the state standard.

Discussion

The data show that in third grade, many students made big gains from humble starts while good readers suffered from slow growth. Whether growing slow or fast, however, few third graders managed to reach proficiency on the state standards. The skills which third graders bring to school had more effect on scores than current learning rates did. For a substantial majority of students to have achieved proficiency on the state standards would have involved adding an additional year's worth of learning.

This study focuses on third grade, an important stage in reading development. It is the level at which the state performance standards, Measures for Academic Progress, and the early literacy screener are all involved. The slice-in-time sample does not account for year-to-year or longitudinal variation. Because the study is limited to data aggregated at the school level rather than at the classroom level, class size effects were not examined. Furthermore, most correspondence students remained unaccounted because

they largely did not participate in assessments. An examination of broader ranges of grades, years, school types, characteristics of students and teachers, and other factors would afford more insights into growth variations and answer "why" questions.

This study points to two opportunities for students to catch up to standards. Thousands of students start well behind and then undergo too little growth to reach proficiency. One remedy to help a substantial majority of students achieve to the state performance standards is faster proficiency growth in kindergarten and beyond at rates approaching 1-1/2 years of learning in 1 year. Another lies with pre-kindergarten instruction to provide the opportunity for most students to start school exceeding the national norms. Both opportunities involve additional instruction. However, the data show that for students to start school already having skills at grade level, especially reading, is more effective than relying on accelerated growth later.

Entrenching the opportunity to learn for a full spectrum of students recognizes that very many things affect academic growth and proficiency, and that large numbers of students arrive poorly prepared.[8,9] However, Judge Gleason had ruled that every student regardless of circumstances is entitled by the constitution to receive a meaningful opportunity to become proficient and that the legislature must provide it.[1]

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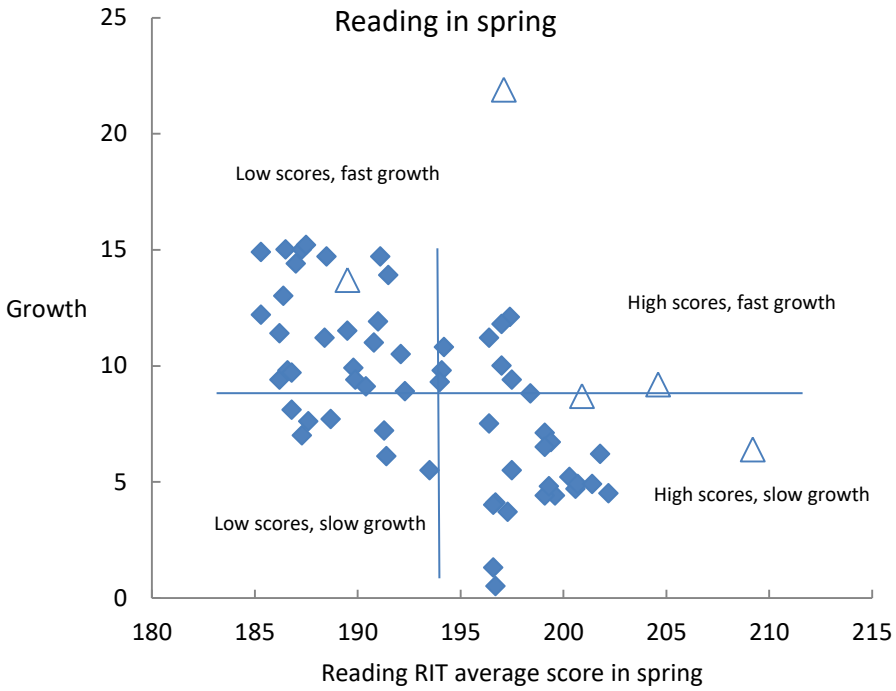

Fig. 1. Growth of reading between fall and spring of third grade declined with the average third grade spring score among 64 public schools in Anchorage, 2023-2024. Charters reporting third grade scores are shown as open triangles. AK Choice and Frontier charter schools did not report third grade scores. Lines show averages among schools. ASD data. NAACP chart. $r = -0.59$, $p < 0.01$

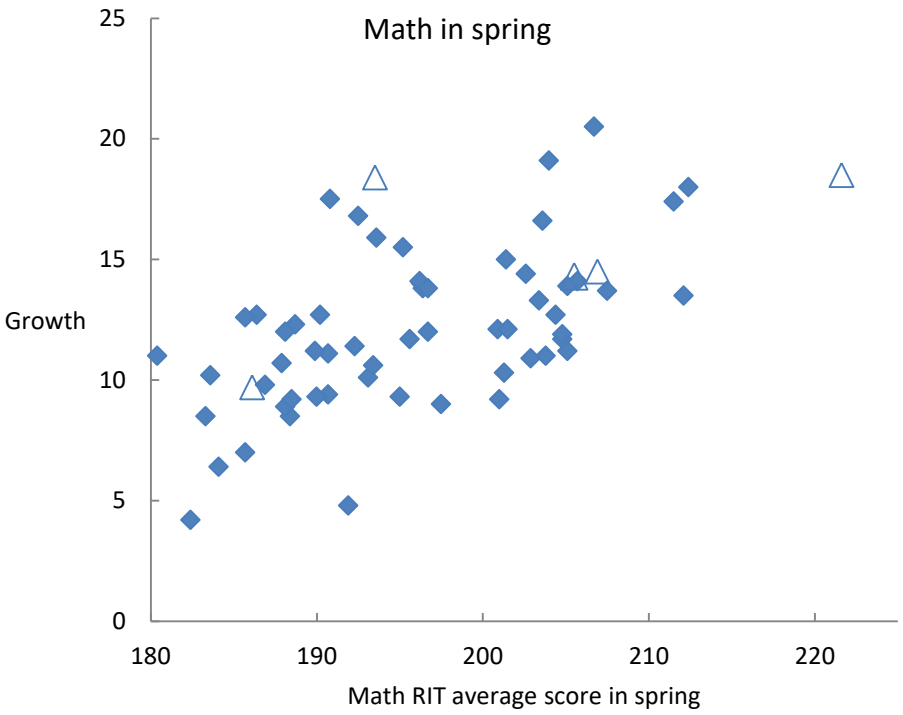

Fig. 2. Math growth between fall and spring of third grade increased with the average third grade spring score among 63 public schools in Anchorage, 2023-2024. Charters reporting third grade scores are shown as open triangles. AK Choice and Frontier Charter schools did not report. ASD data. r = 0.60, $p < 0.01$

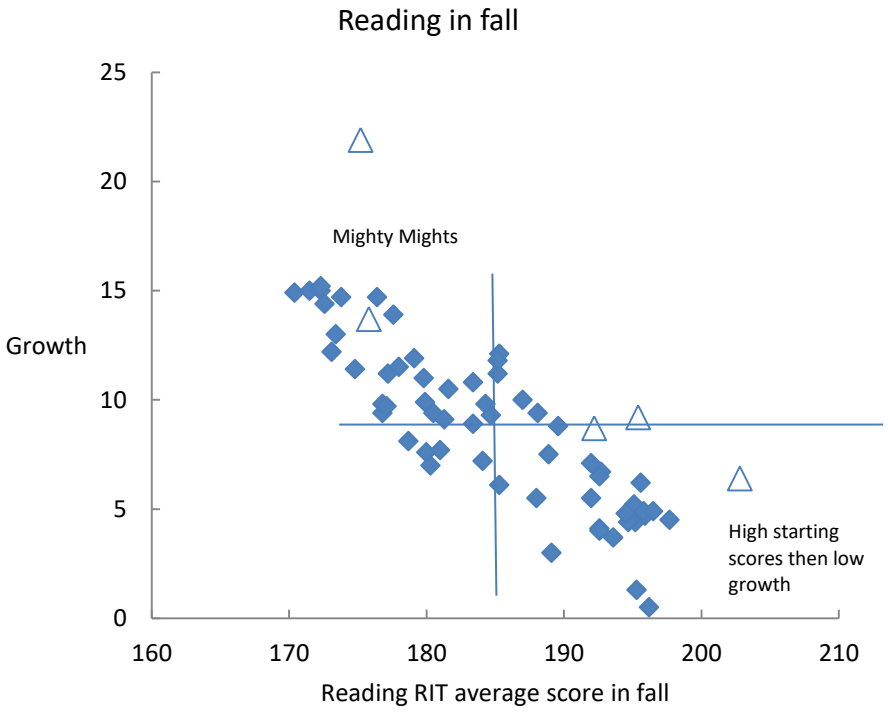

Fig. 3. Reading growth fell with rising proficiency as measured between the fall and spring of third grade among 64 Anchorage schools in 2023-2024. Charters reporting third grade scores are shown as open triangles. AK Choice and Frontier charter did not report. The lines show averages. ASD data. $r = -0.85$, $p < 0.01$

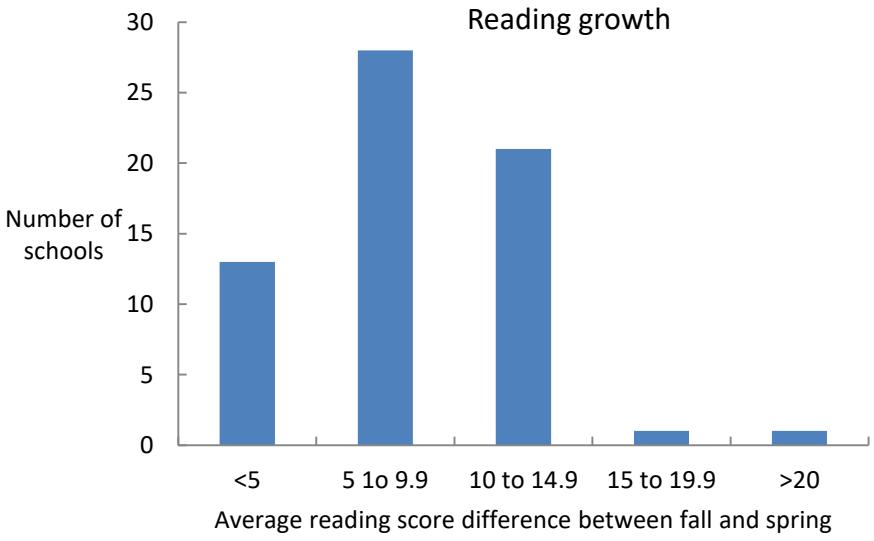

Fig. 4. Reading growth school averages of third graders by their frequency. Reading growth is the difference between the Measures of Academic Progress RIT scores in September and the following April, in the 2023-2024 school year. The average of 64 school scores is 9.0 and the sample standard deviation is 4.0. The thirteen schools comprising the left bar representing average scores less than 5 points, or about ½ year of growth, are as follows: Alpenglow, Aurora, Bear Valley, Birchwood ABC, Chugach Optional, Chugiak, Girdwood, Homestead, Inlet View, Northern Lights ABC, O'Malley, Rabbit Creek and Rogers Park. ASD data; NAACP graph.

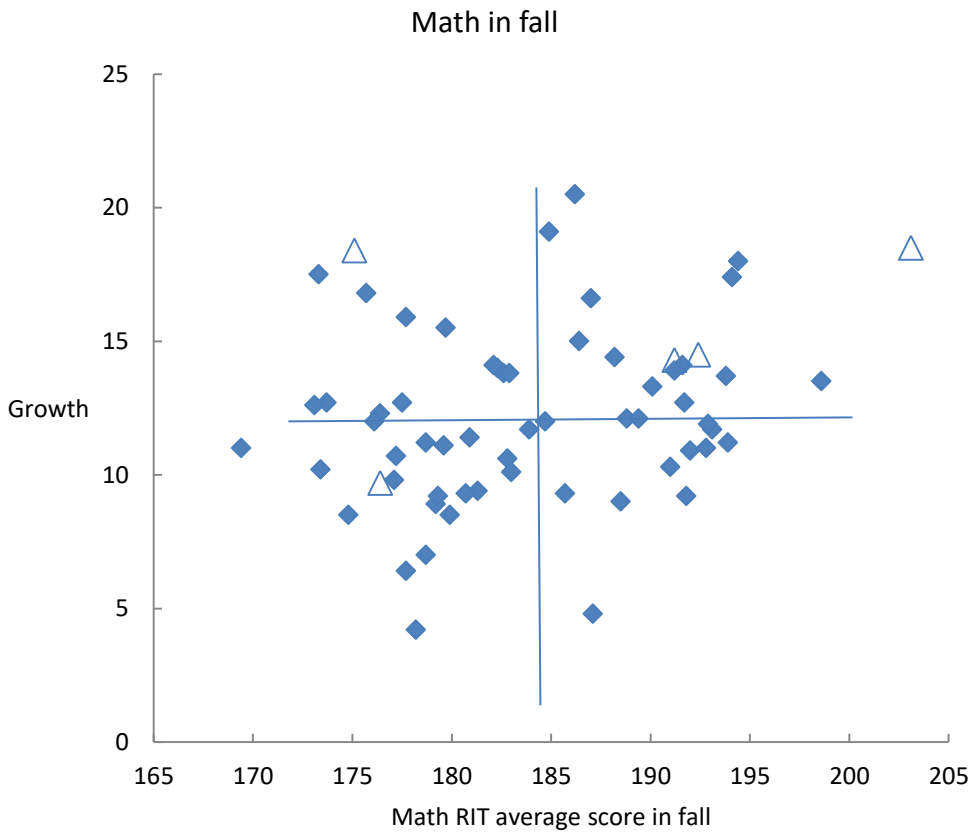

Fig. 5. School average math growth between fall and spring of third grade did not vary significantly with the average third grade starting score in the fall among 63 public schools in Anchorage, 2023-2024. Charter schools are open triangles. Frontier charter school and AK Choice did not report. Family Partnership correspondence reported only 20% of third graders and was omitted. Lines show averages. ASD data. $r = 0.23$, $p > 0.05$ NS

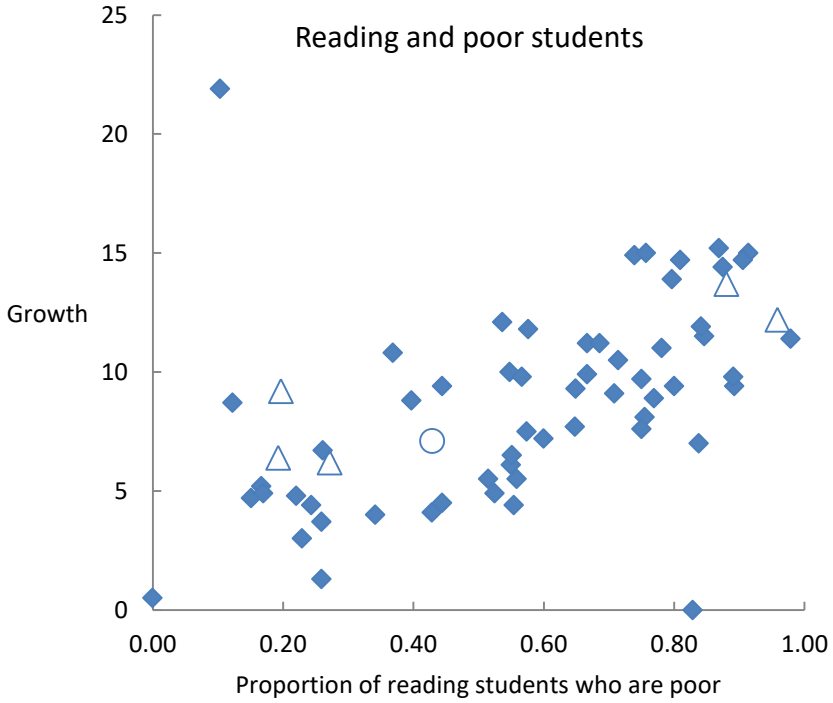

Fig. 6. Reading growth in ASD third grade increased with percentage poor students. Chart shows Measures of Academic Progress 2023-2024 for 64 reporting schools. Open symbols show charter schools, and a correspondence school reporting only 20% of third graders. Not reported by ASD are AK Choice Virtual and Frontier Charter. ASD data. $r = 0.67$, $p < 0.01$

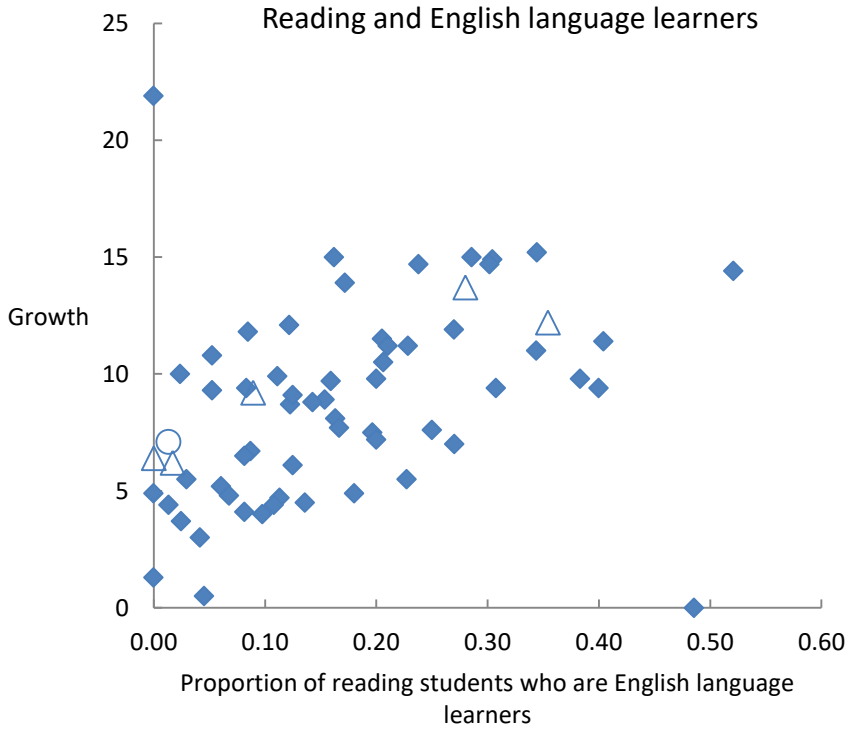

Fig. 7. Reading growth in third grade increased with the percentage of ELL students. Chart shows Measures of Academic Progress 2023-2024 for 64 reporting schools. Open symbols show charter schools, and a correspondence school reporting only 20% of third graders. Not reported by ASD are AK Choice Virtual and Frontier Charter. ASD data. $r = 0.58$, $p < 0.01$

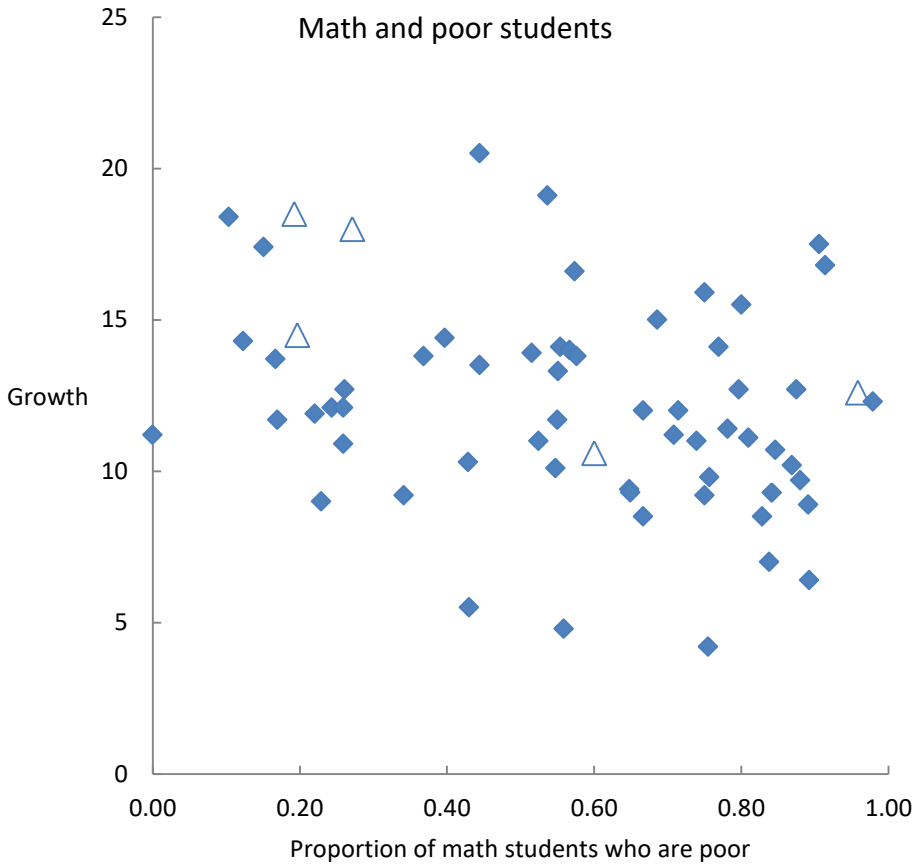

Fig. 8. Math growth showed a modest decline with the percentage poor third graders. Chart shows Measures of Academic Progress 2023-2024 for 63 reporting schools. Open symbols show charter schools. Not reported by ASD are AK Choice and Frontier Charter. Family Partnership correspondence reported only 20% of students and was omitted. ASD data. NAACP chart. $r = -0.27$, $p < 0.05$

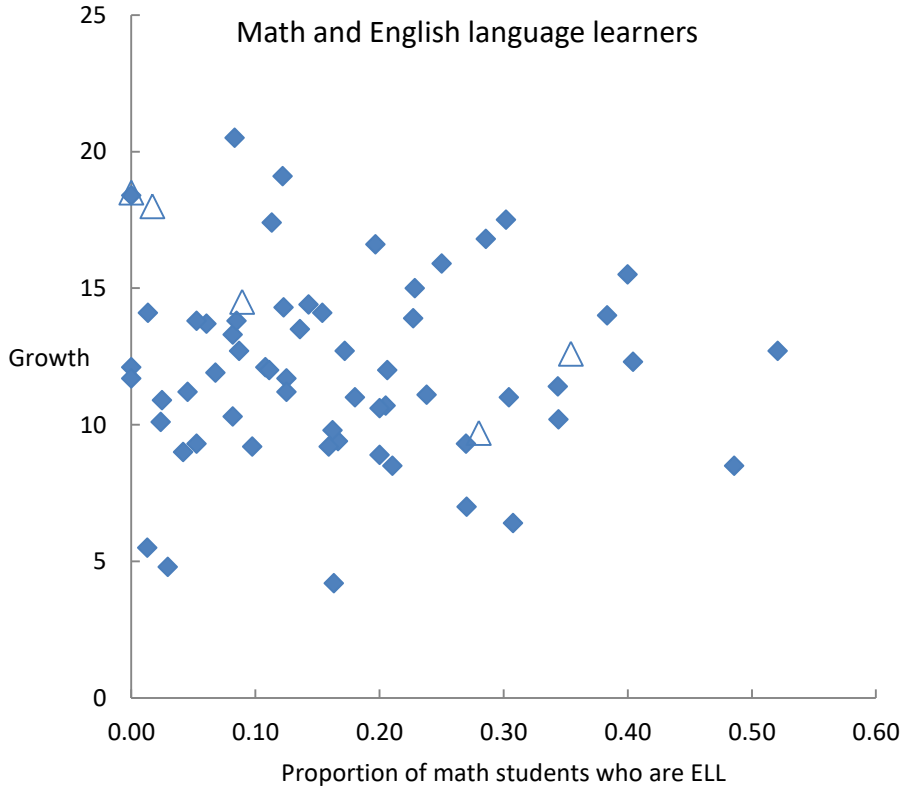

Fig. 9. Math growth in third grade did not generally change among schools with their percentage of ELL students, although it may have declined among charter schools. Chart shows Measures of Academic Progress 2023-2024 for 63 reporting schools. Charter schools are shown as open symbols. ASD did not report AK Choice Virtual and Frontier Charter. Family Partnership correspondence reported only 20% of students and was omitted. ASD data. $r = -0.093$, $p < 0.46$ NS

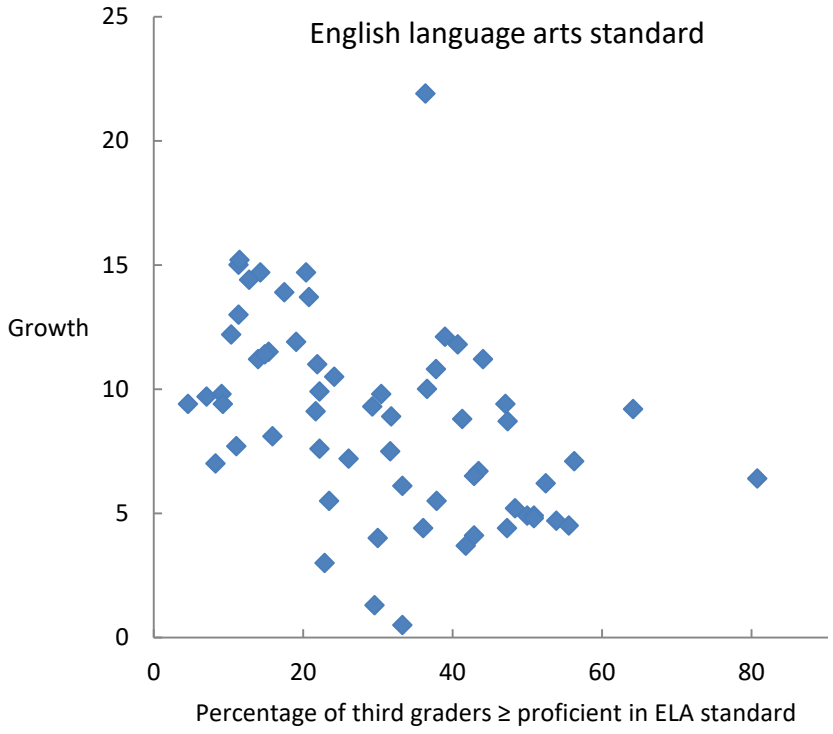

Fig. 10. Faster reading growth was not associated with higher percentage of students proficient on the state English language arts standard. A school with rapidly growing third grade readers was unlikely to have a high percentage of proficient students. Schools with more than 50 percent of students proficient had generally less growth than average in reading in Anchorage in 2023-2024. All above-average growth schools except one had fewer than 50 percent of students proficient on the state English language arts standard assessment. ASD and DEED data. NAACP chart.
$r = -0.52$, $p < 0.01$

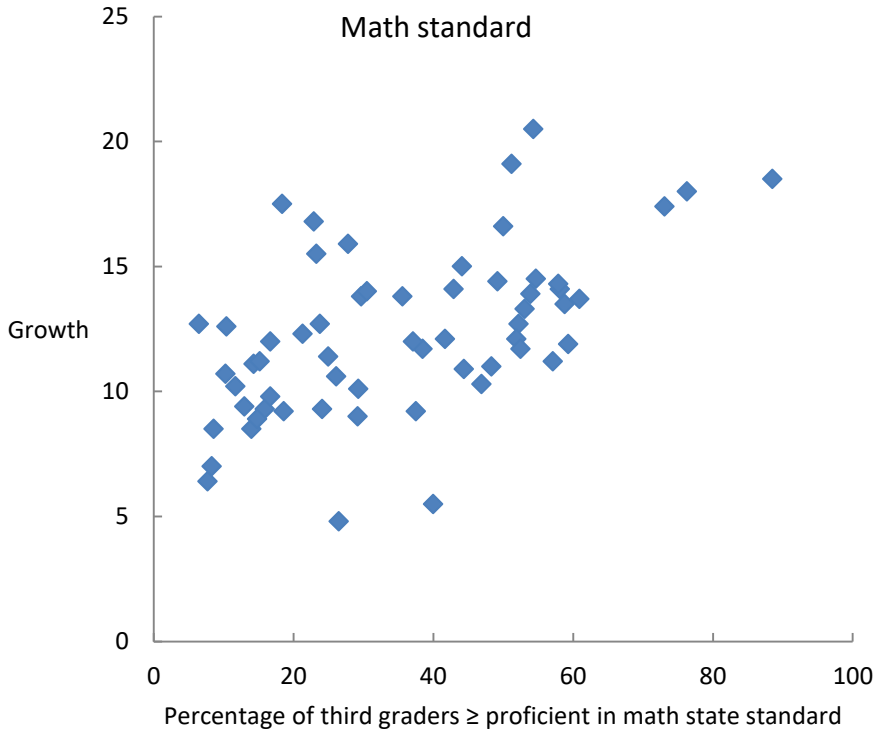

Fig. 11. Greater math growth was associated with higher percentages of schools having more than 50 percent of students proficient on the state math standard assessment. However, 11 higher-than-average-growth schools did not achieve a majority of proficient third graders. Sample size was 60 schools. ASD and DEED data. NAACP chart. $r = 0.55$, $p < 0.01$

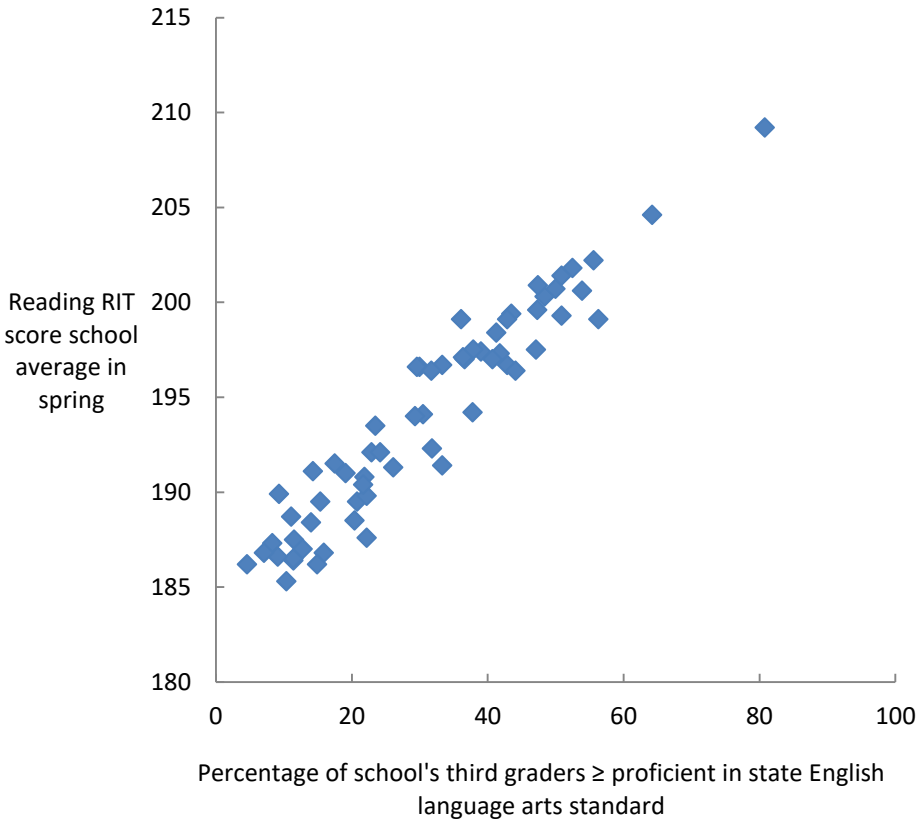

Fig. 12. Correlation between Measures of Academic Progress reading score and proficiency on the state standard for English language arts among schools' averages, Anchorage School District third grades, 2024. ASD and DEED data. NAACP chart. $r = 0.96$, $p < 0.01$

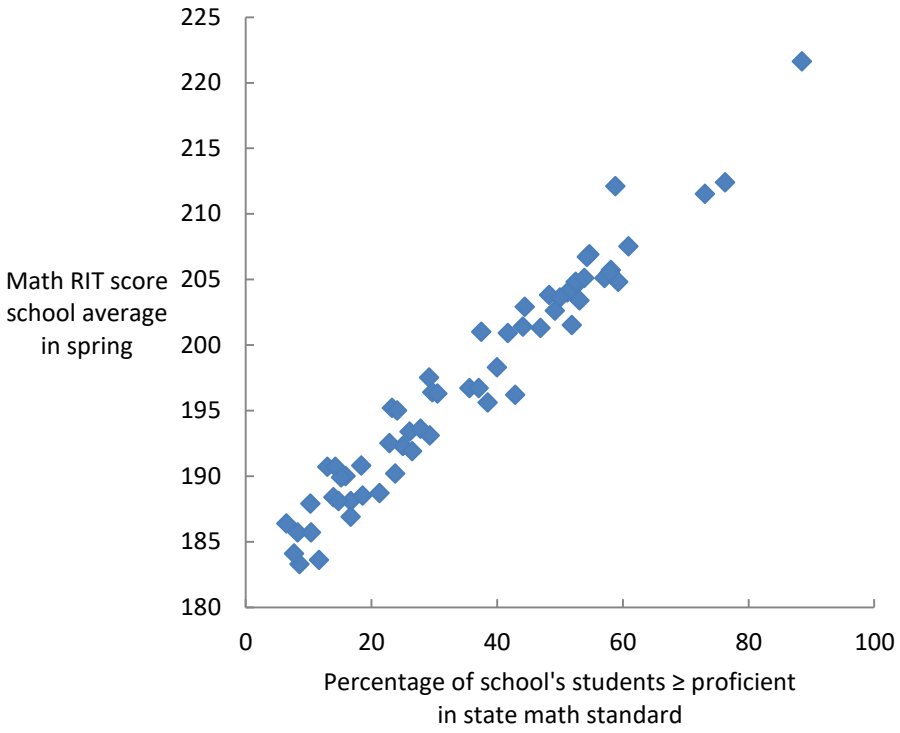

Fig. 13. Correlation between Measures of Academic Progress math score and proficiency on the state standard for math, Anchorage School District third grades, 2024. ASD and DEED data. NAACP chart. $r = 0.98$, $p < 0.01$

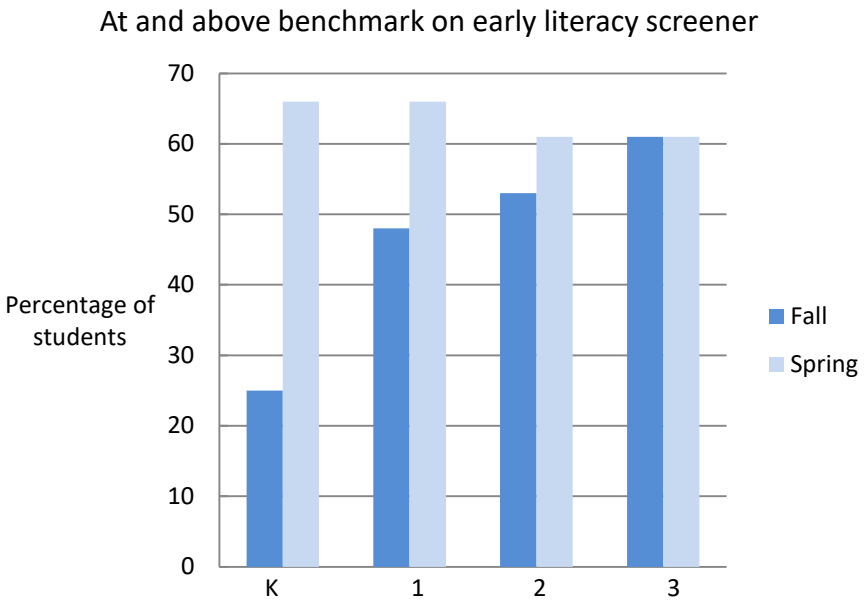

Fig. 14. In the earliest grades, low entering performance was followed by high growth measured by the early literacy screener. Chart shows the percentage of Anchorage students scoring at or above the benchmark on Amplify mClass DIBELS 8th edition in grades kindergarten to third at the beginning and end of the 2023-2024 school year. ASD data. NAACP chart.

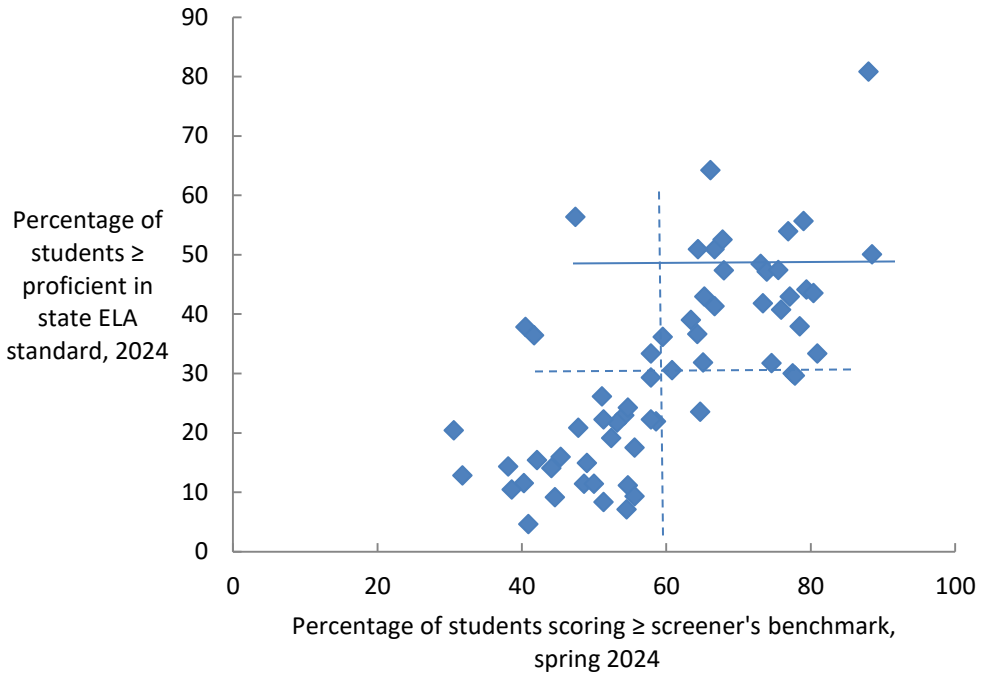

Fig. 15. Third graders' literacy screener scores somewhat predict their ELA proficiency among 62 schools ($r = 0.7$, $p < 0.01$). However, a high screener score does not generally mean a high likelihood of proficiency on the state standard. Among the 29 schools having above average screener scores, only eight had greater than 50 percent of their student body proficient or better on the English language arts standard assessment in 2024. Dashes show averages among schools. Line shows where 50 percent of a school's third graders score ≥ proficient on the ELA standard. ASD data. NAACP chart.

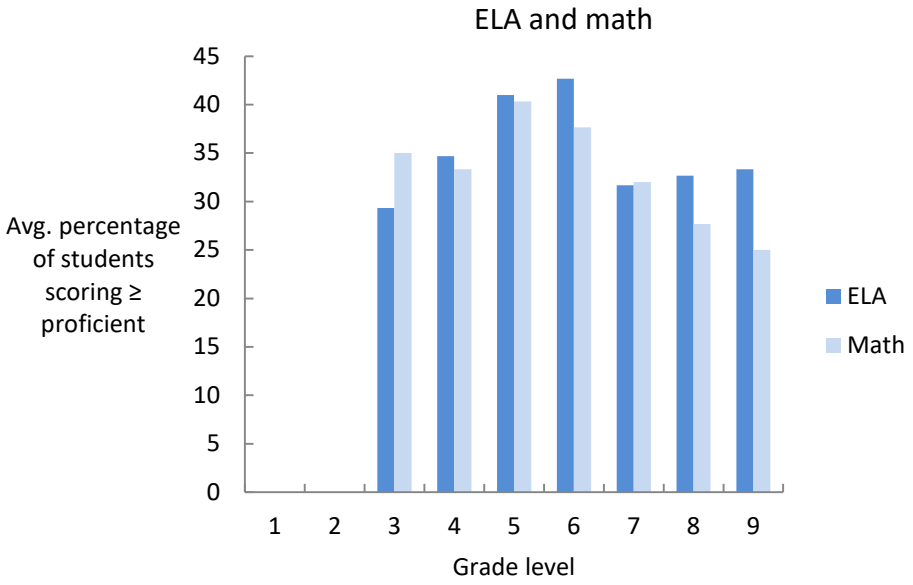

Fig. 16. Increasing proficiency from third to sixth grade on the state English language arts and math standards assessments. Chart shows the average perc**entage of Anchorage school district students who scored proficient or advanced on the state AK STAR assessments in 2022, 2023 and 2024. ASD data. NAACP chart.**

Supplemental Data

Table lists Measures of Academic Progress average RIT scores in third grade, Anchorage School District, 2023-2024.

	Reading		Math	
	Spring	Fall	Spring	Fall
Airport Heights	186.4	173.4	183.3	174.8
AK Native Cultural	189.5	175.8	186.1	176.4
Alpenglow	196.7	192.6	201.3	191.0
Aquarian	204.6	195.4	206.9	192.4
Aurora	199.6	195.2	205.7	191.6
Baxter	186.8	178.7	182.4	178.2
Bayshore	200.3	195.1	207.5	193.8
Bear Valley	200.6	195.9	211.5	194.1
Birchwood ABC	196.6	192.6	201.0	191.8
Bowman	197.5	188.1	206.7	186.2
Campbell STEM	188.7	181.0	190.7	181.3
Chester Valley	189.5	178.0	187.9	177.2
Chinook	191.5	177.6	190.2	177.5
Chugach Optional	199.1	194.7	200.9	188.8
Chugiak	197.3	193.6	202.9	192.0
College Gate	188.4	177.2	188.4	179.9
Creekside	191.0	179.1	190.0	180.7
Denali Montessori	197.0	187.0	193.1	183.0
Eagle Academy	209.2	202.8	221.6	203.1
Eagle River	194.2	183.4	196.4	182.6
Fairview	186.2	174.8	188.7	176.4
Family Partnership	199.1	192.0	198.3	192.8
Fire lake	191.4	185.3	195.6	183.9
Girdwood K-8	196.7	196.2	205.1	193.9
Gladys Wood	196.4	185.2	201.4	186.4
Gov’t Hill	194.1	184.3	196.3	182.3
Homestead	192.1	189.1	197.5	188.5
Huffman	199.4	192.7	204.4	191.7
Inlet View	196.6	195.3	201.5	189.4
Kasuun	192.3	183.4	196.2	182.1
Kincaid	199.1	192.6	203.4	190.1
Klatt	190.8	179.8	192.3	180.9
L. Hood	185.3	170.4	180.4	169.4
L. Otis	187.3	180.3	185.7	178.7

Table lists Measures of Academic Progress average RIT scores in third grade, Anchorage School District, 2023-2024, con't.

	Reading		Math	
	Spring	Fall	Spring	Fall
Mtn. View	186.5	171.5	192.5	175.7
Muldoon	186.2	176.8	184.1	177.7
Northstar	188.5	173.8	190.8	173.3
O'Malley	201.4	196.5	204.8	193.1
Ocean View	197.4	185.3	204.0	184.9
Orion	197.0	185.2	196.7	182.9
Polaris	193.5	188.0	191.9	187.1
Ptarmigan	186.6	176.8	188.1	179.2
Rabbit creek	199.3	194.5	204.8	192.9
Ravenwood	201.8	195.6	212.4	194.4
Rilke Schule	200.9	192.2	205.5	191.2
Rogers Park	202.2	197.7	212.1	198.6
Russian Jack	189.9	180.5	195.2	179.7
Sand Lake	196.4	188.9	203.6	187.0
Scenic Park	197.5	192.0	205.1	191.2
Spring Hill	186.8	177.1	188.5	179.3
Susitna	192.1	181.6	196.7	184.7
Taku	187.3	172.3	186.9	177.1
Trailside	198.4	189.6	202.6	188.2
Tudor	190.4	181.3	189.9	178.7
Turnagain	191.3	184.1	193.4	182.8
Tyson	187.5	172.3	183.6	173.4
Ursa Minor	194.0	184.7	195.0	185.7
Williwaw	187.0	172.6	186.4	173.7
Willow Crest	185.3	173.1	185.7	173.1
Winterberry	197.1	175.2	193.5	175.1
Wonder Park	187.6	180.0	193.6	177.7

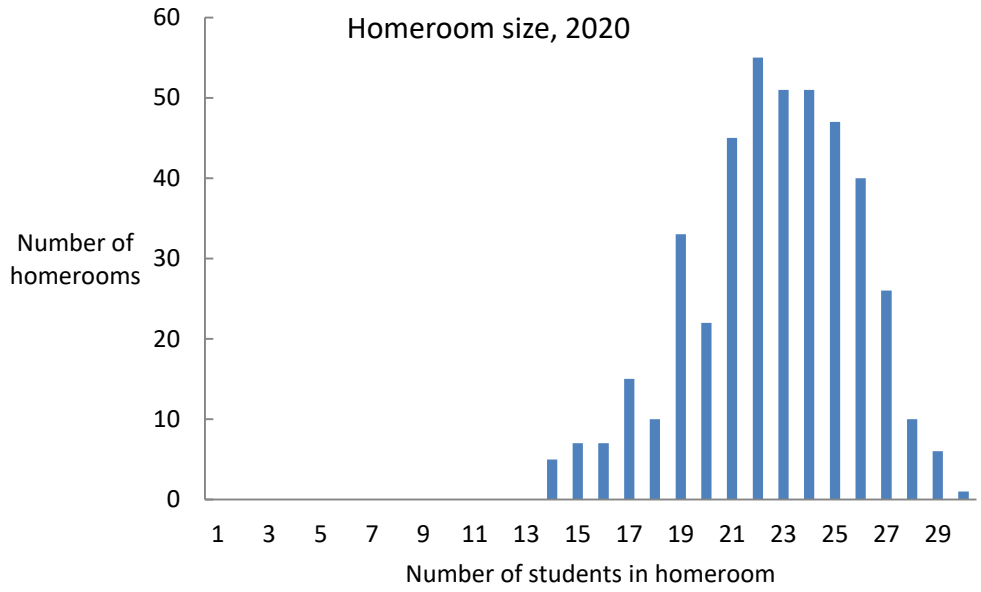

Fig. S1. Frequency distribution of the number of students in 429 homerooms in grades 1, 2 and 3 in 56 elementary schools in February 2020, as reported to NAACP by the Anchorage School District.

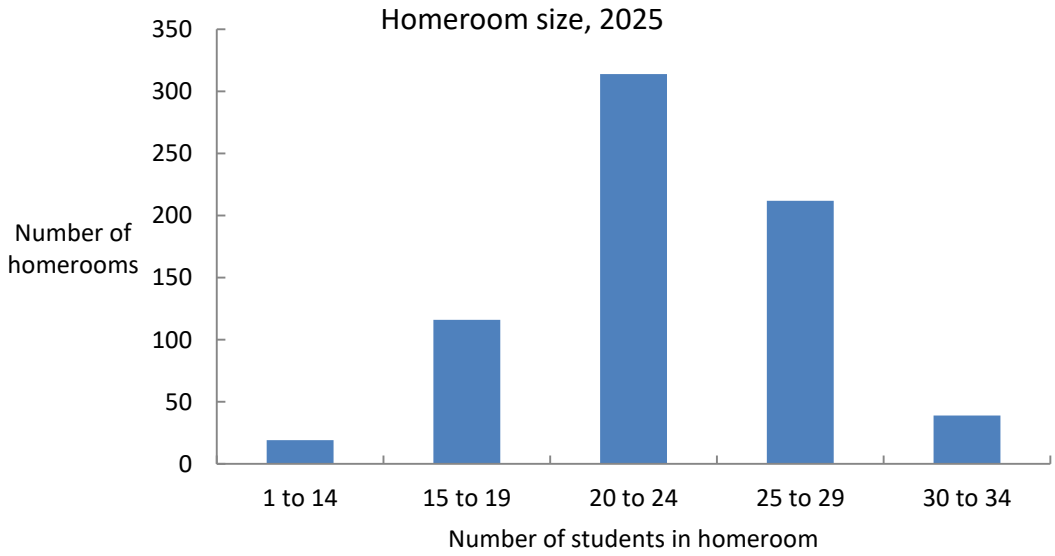

Fig. S2. Frequency distribution of the number of students in 700 homerooms in 60 elementary schools in February 2025, as reported to NAACP by the Anchorage School District.

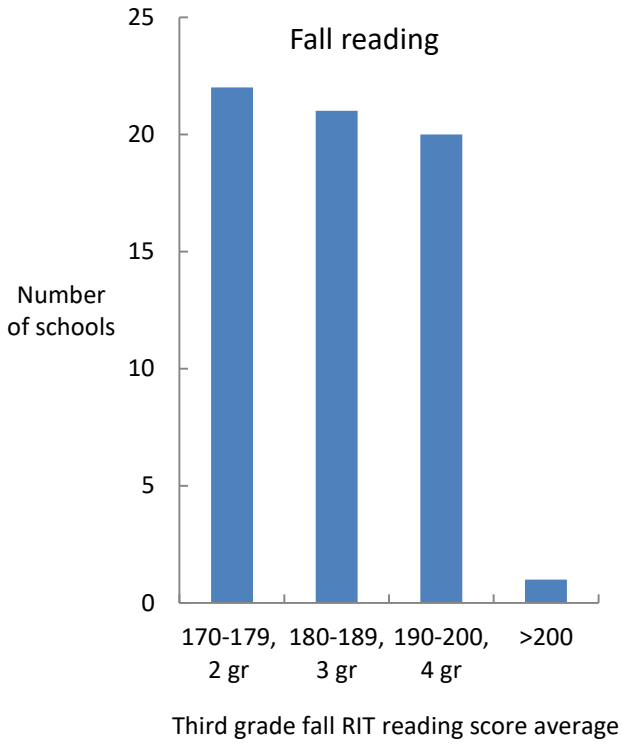

Fig. S 3. Thirty one percent of ASD schools (20 of 64) reporting third grade average reading scores in 2023-2024 placed closer to the national norm of second graders than to the 2020 national norm of third graders. The third grade national norm for students was 186.6, and second grade national norm was 172.4. The histogram shows third grade fall math average RIT score distribution among ASD schools, 2023-2024. Grade levels having their national student achievement norms within the intervals are shown on the second line under the horizontal axis. ASD and NWEA data.

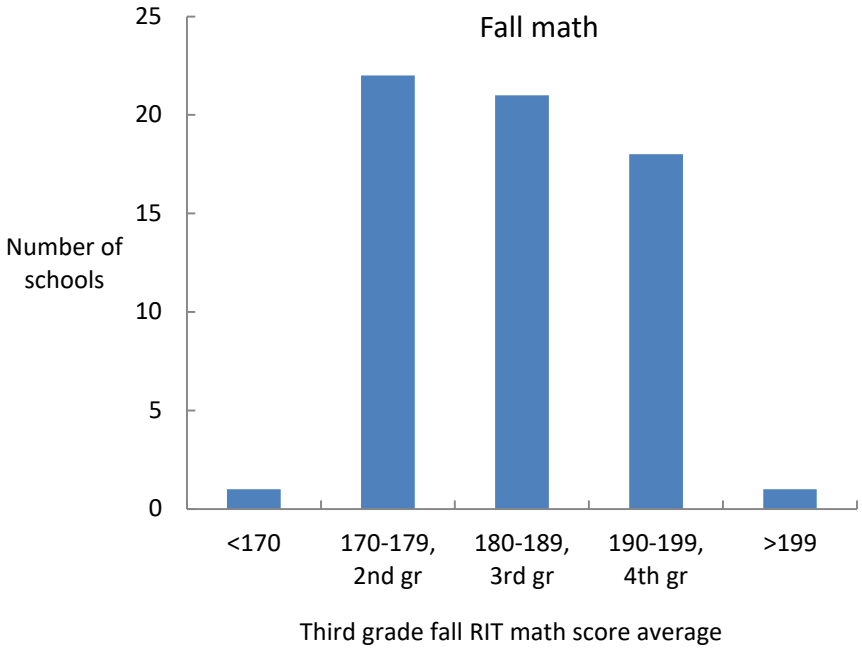

Fig. S 4. Forty four percent of the ASD schools (28 of 63) reporting third grade average math scores in 2023-2014 placed closer to the 2020 national norm of second graders than to the national norm of third graders. The third grade national norm was 188.5, and the second grade national norm for students was 175.1. The histogram shows third grade fall math average RIT score distribution among 63 ASD schools, 2023-2024. Grade levels having their Measures of Academic Progress national student achievement norms within the intervals are shown on the second line under the horizontal axis. ASD and NWEA data.