

---

Fairbanks North Star Borough School District

**Student Assessment Results**  
**for the Fairbanks North Star Borough**  
**School District**

**2018-19 School Year**

Prepared by:  
Ellis Ott, Ph.D., Research Associate  
Research & Accountability Department  
September 17, 2019



## TABLE OF CONTENTS

Executive Summary .....	<u>ii</u>
Introduction .....	<u>1</u>
PEAKS and Alaska Science Results .....	<u>2</u>
Results from 2016-17 to 2018-19 .....	<u>2</u>
Results by Demographics.....	<u>3</u>
Measures of Academic Progress Results .....	<u>5</u>
Results from 2016-17 to 2018-19 .....	<u>5</u>
Growth Results Fall to Spring.....	<u>6</u>
Results by Demographics.....	<u>7</u>
Growth Results by Demographics .....	<u>8</u>
Conclusion .....	<u>9</u>

## **EXECUTIVE SUMMARY**

This report presents district level results of the Performance Evaluation of Alaska's Schools (PEAKS), Alaska Science Assessment, and Measures of Academic Progress (MAP) taken by Fairbanks North Star Borough School District students during the 2016-17 to and 2018-19 school years. Further disaggregated results will be available at the district's Data Dashboard:

<https://public.tableau.com/profile/k12northstar#!/>

### **Notable General Facts:**

- On average, students in the district outperform students in the state on standardized assessments.
- District results were higher than the Big 4 for Science, but not for ELA and Math.
- Secondary students showed above national average performance on MAP, with Elementary showing below the national average.
- MAP growth between Fall 2018 and Spring 2019 below the national average.
- Achievement gaps for the MAP and PEAKS showed similar results.
- Growth gaps on the MAP were substantially smaller than achievement gaps on the MAP and PEAKS.
- Poor attendance (<80%) students showed either medium or large achievement gaps vs students with strong attendance (95% or higher)

## **INTRODUCTION**

The PEAKS is a summative online assessment that measures the content and skills outlined in Alaska's challenging academic standards that were adopted in 2012. The PEAKS was administered in Spring 2019 to students in grades 3-9 in the subjects of English Language Arts (ELA) and Math. Overall scores fall into one of four performance levels: Far Below Proficient, Below Proficient, Proficient, and Advanced. The results for the PEAKS is reported in terms of proficiency rates (% of scores that are Proficient or Advanced).

The Alaska science summative assessment measures the Alaska Science Grade Level Expectations (GLEs) adopted in 2006 for students in grades 4, 8, and 10. The science assessment was administered in Spring 2019 along with the PEAKS.

The Measures of Academic Progress are computer adaptive achievement tests in Mathematics and Reading administered in the Fall, Winter, and Spring of each school year for students in grades 3-10. Thus, both status measures and growth measures (within the school year) are available. Status results are reported in terms of Normal Curve Equivalent scores (NCEs fit on a normal bell-shaped curve centered at 50, with a standard deviation of 21.06). An NCE converts a national percentile rank (NPR) to a more statistically sound measure that can be averaged and compared over time. Scores above 50 indicate above average performance and scores below 50 indicate below average performance. Growth measurement between the Fall and Spring of 2018-19 will also be reported in terms of NCEs (based on Spring performance relative to Fall performance and typical national growth).

More information and results from Alaska's assessment system are available from the State of Alaska's Department of Education and Early Development at: <http://www.eed.state.ak.us>.

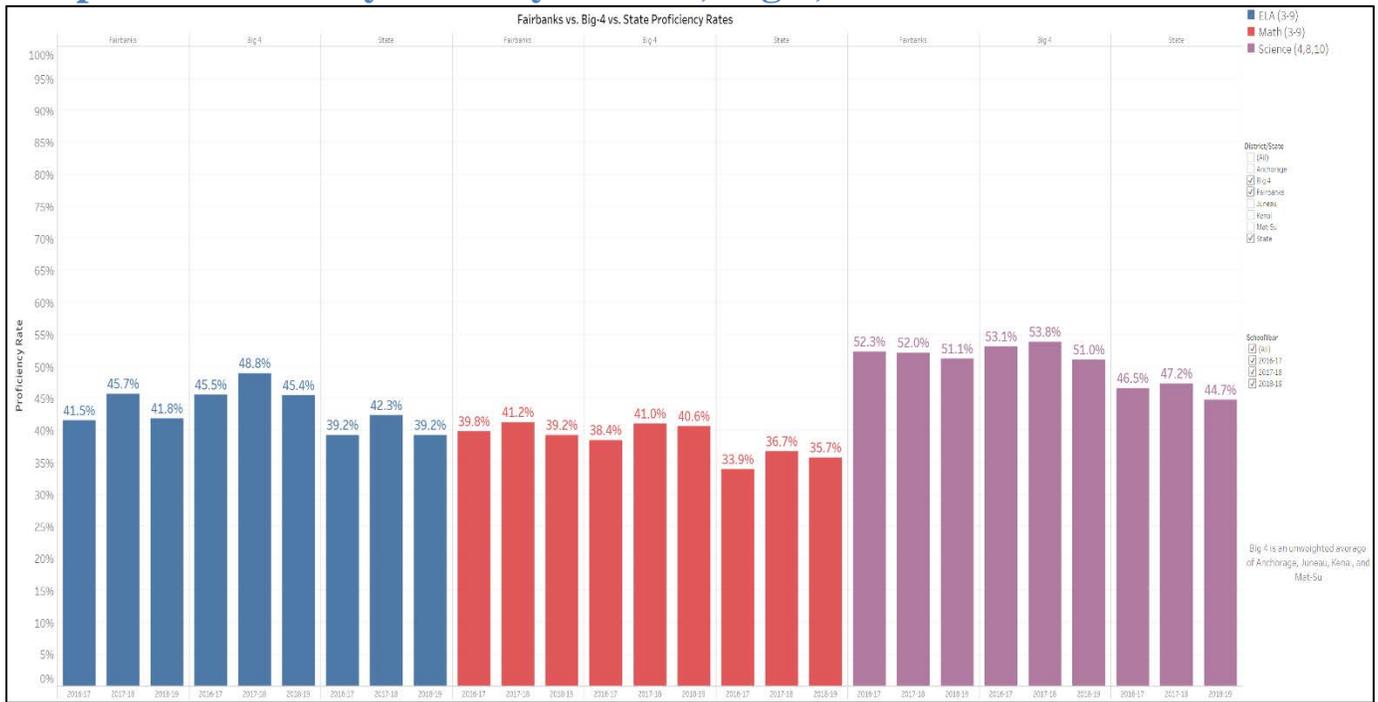
# PEAKS AND ALASKA SCIENCE RESULTS

- Spring 2019 PEAKS: 41.8%, and 39.2% of students were proficient in ELA and Math, respectively (grades 3-9)
- Spring 2019 AK Science: 51.1% of students were proficient in Science (grades 4, 8, and 10)

## RESULTS FROM 2016-17 TO 2018-19

Graph 1 provides summaries of the proficiency rates for the school district from Spring 2017 to Spring 2019, including results for the big 4, and statewide on the PEAKS and AK Science assessment.

**Graph 1: Proficiency Rates by District, Big 4, State**



\* Big 4 includes the 4 other largest districts in Alaska: Anchorage, Juneau, Kenai, and Mat-S

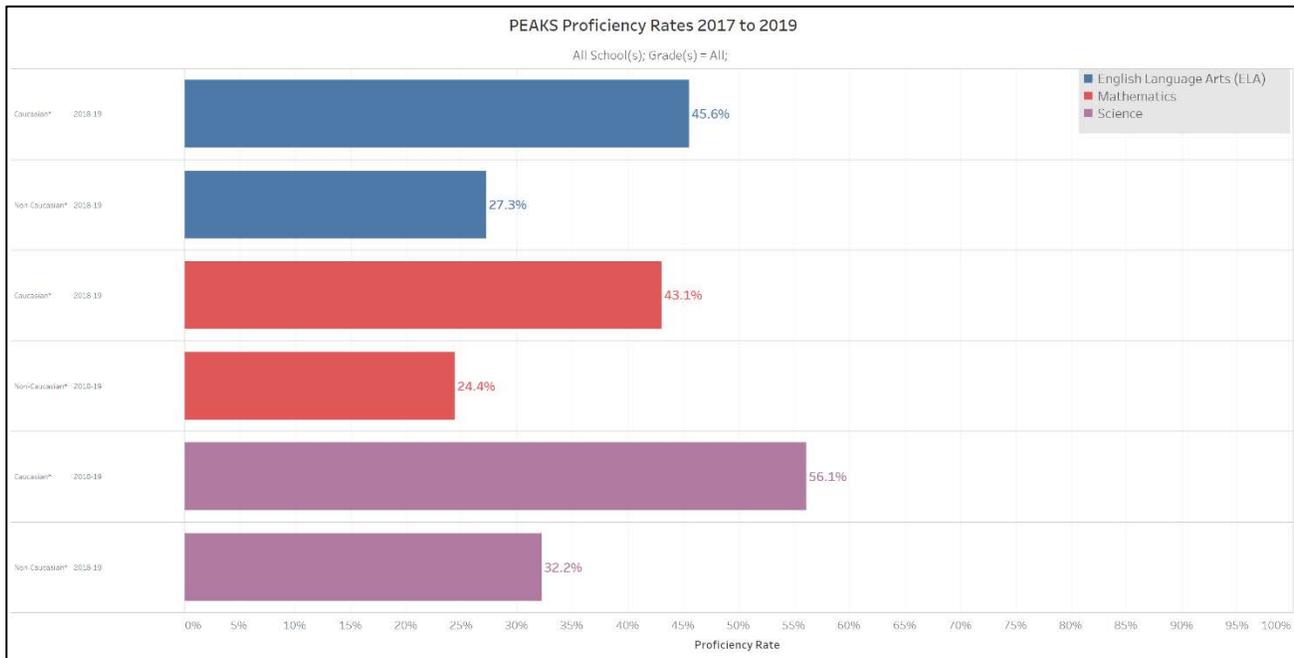
## **RESULTS BY DEMOGRAPHICS**

Proficiency rates for ELA, Math, and Science vary by attendance, race/ethnicity, gender, migrant, military, economic status, disability, and English learner status (grades 3-9 for ELA/Math and 4, 8, and 10 for Science). An example comparison group of Caucasian\* is shown in graph 2, and additional comparison groups can be reviewed at the district's data dashboard: <https://public.tableau.com/profile/k12northstar#!/>

The effect size of proficiency rate gaps can be described as small, medium, or large (percentage point differences of around 10, 20, and 30, respectively):

- Very small gaps were shown for Female, Multi-Ethnic, Asian/Pacific Islander, Hispanic, and Military (Math and Science).
- Small gaps were shown with the groups of African American, Caucasian (ELA), Migrant (Math), and Military (ELA).
- Medium gaps were shown with the groups of Economic Disadvantage, Migrant (ELA and Science), Caucasian (Math and Science), Alaska Native/American Indian, English Language Learners (Math), and poor attendance (Science).
- Large gaps were shown with the groups of English Language Learners (ELA and Science), Students with Disabilities, and poor attendance (ELA and Math).

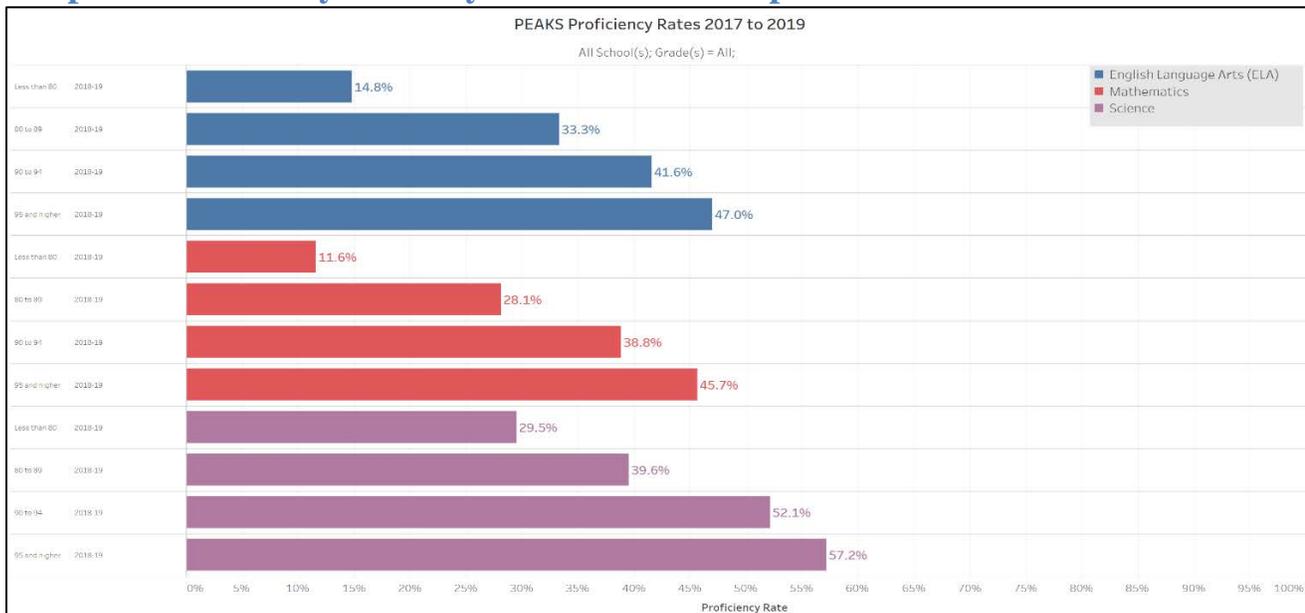
## Graph 2: Proficiency Rates by Caucasian\* vs Non-Caucasian\*



\* Includes students that identified an additional race(s) and/or as Hispanic

Graph 3 provides proficiency rates by attendance groups (less than 80% attendance, 80%-89%, 90%-94%, and more than 95%).

## Graph 3: Proficiency Rates by Attendance Group



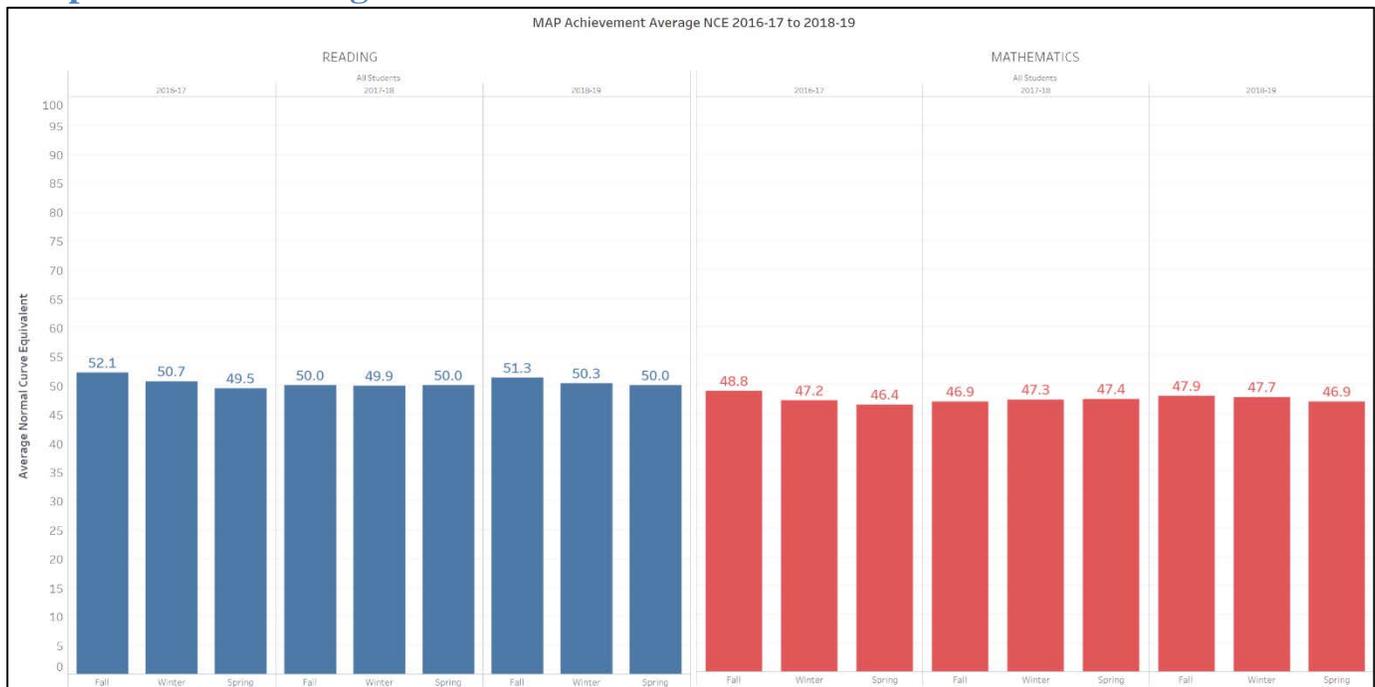
## MEASURES OF ACADEMIC PROGRESS RESULTS

Students in grades 3-10 took the Measures of Academic Progress in the Fall, Winter, and Spring of each school year from 2016-17 to 2018-19 in the subjects of Reading and Math. The scores are used for instructional decision-making as well as comparing the skill levels of district students with students across the nation.

### RESULTS FROM 2016-17 TO 2018-19

Results shown in graph 4 are reported in terms of Normal Curve Equivalent (NCE) values in the Fall, Winter, and Spring of 2016-17 to 2018-19 for Reading and Math.

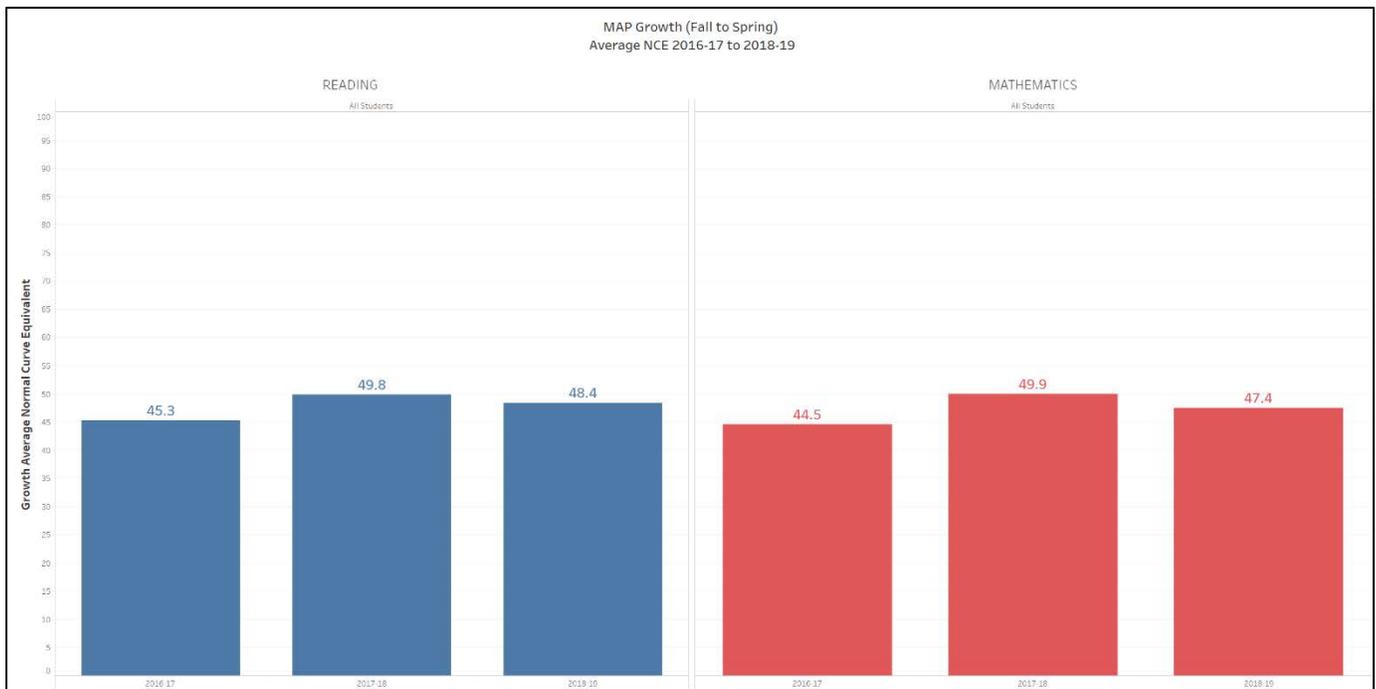
**Graph 4: MAP Average NCE 2016-17 to 2018-19**



## **GROWTH RESULTS FALL TO SPRING**

Results shown in graph 5 below show NCE values for growth (Fall to Spring) in Reading and Math in 2016-17 to 2018-19 school years. These NCE values are conversions of the Student Growth Percentiles. Each student's Growth Percentile is based on their Spring score relative to other students with the same grade level, Fall score, and test subject (Reading or Math) in the national norming sample (referred to as academic peers). A MAP growth NCE of 50 means that the student's Spring score is the same as the median of their academic peers.

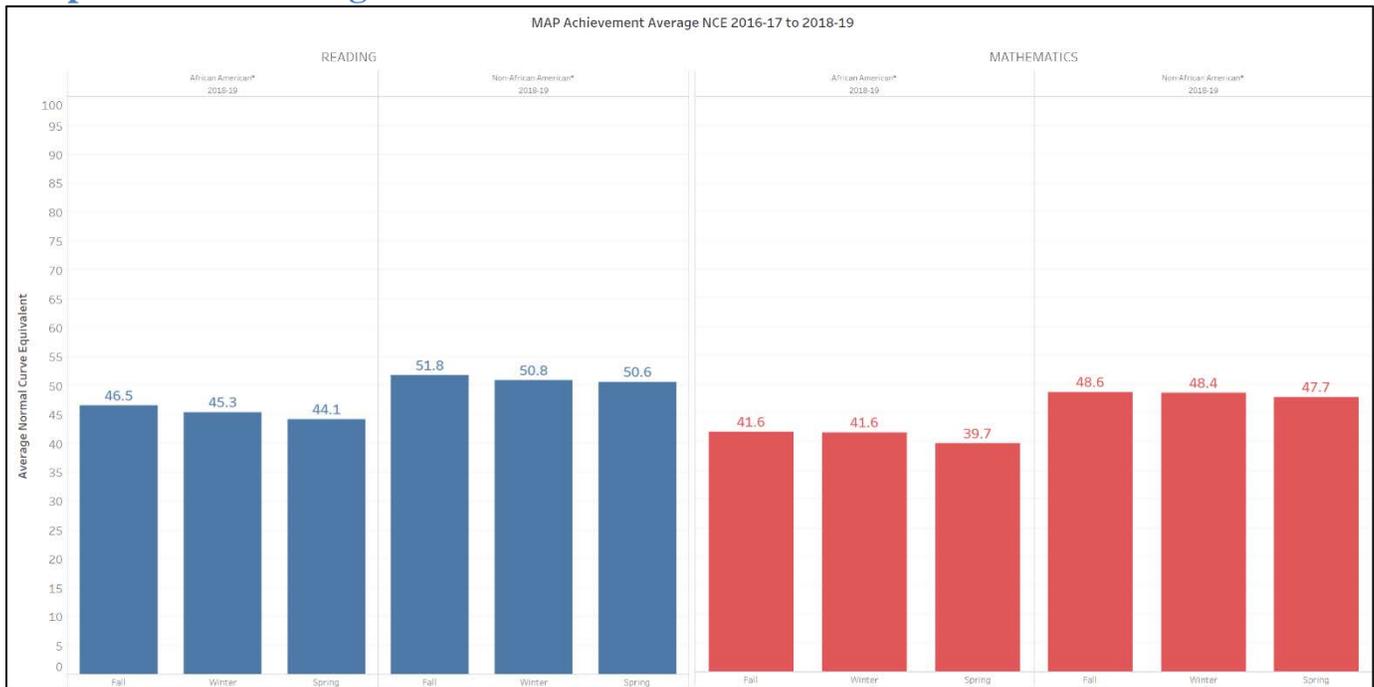
**Graph 5: MAP Growth (Fall to Spring) 2016-17 to 2018-19**



## **RESULTS BY DEMOGRAPHICS**

Reading and Math average NCEs vary by attendance, race/ethnicity, gender, military, migrant, economic status, disability, and English learner status (grades 3-10). Effect sizes were similar to the PEAKS, with a few groups showing smaller effect sizes (Military Reading showing very small instead of small; AK Native/American Indian\* and Migrant Reading, and Caucasian\* showing small gaps instead of medium; poor attendance showing medium gap instead of large in Math). An example comparison group of African American\* is shown in graph 6, and additional comparison groups can be reviewed at the district's data dashboard.

**Graph 6: MAP Average NCE African American\* vs Non-African American\***

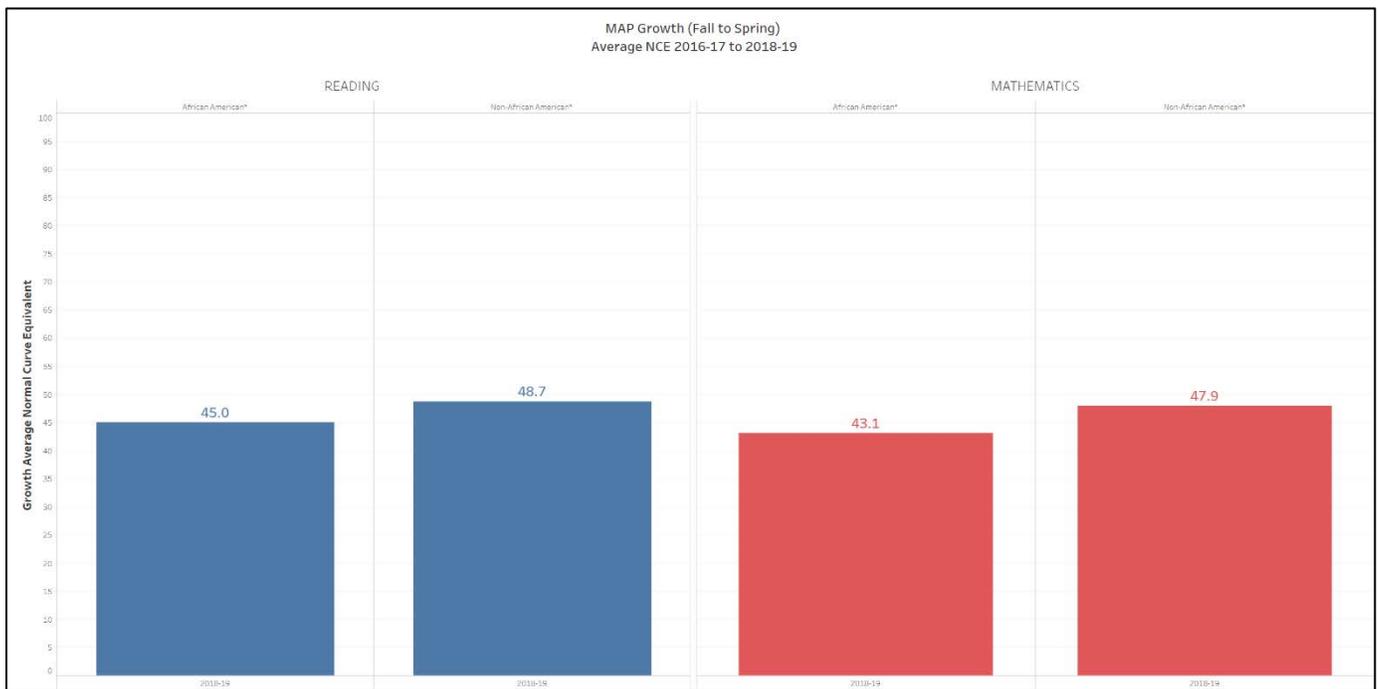


\* Includes students that identified an additional race(s) and/or as Hispanic

## **GROWTH RESULTS BY DEMOGRAPHICS**

Reading and Math average growth NCEs also vary by demographic groups. Graph 7 provides an example of growth results for African American\*. Effect sizes based on growth gaps by demographics were consistently and substantially smaller than achievement gaps for MAP and PEAKS assessments. All growth gaps were “less than small” with small gaps shown only with English Language Learners (Reading), African American\* (Math), and poor attendance.

**Graph 7: MAP Growth 2017-18 African American\* vs Non-African American\***



\* Includes students that identified an additional race(s) and/or as Hispanic

## **CONCLUSION**

To summarize the findings of this report, consider the following questions:

1. **How does the district perform relative to the state, nation, and “Big Four” (Anchorage, Juneau, Kenai, Mat-Su)?**

For most assessments, district students outperform state students, and are competitive with “Big Four” and national students. For the PEAKS, district results are better than for the state in every subject, but below the average performance for the “Big 4” with the exception of Science. For the MAP, district results are at the national average in Reading, and below the national average in Math, with the exception of Secondary Math (Middle and High schools).

2. **How does the district perform over time?**

For the PEAKS, proficiency rates decreased in ELA, Math, and Science in 2018-19 vs 2017-18, while the 18-19 proficiency rate in ELA was slightly higher than in 2016-17. Also, MAP performance in Reading was the same in Spring 2018-19 and Spring 2017-18, but showed a decrease between 18-19 and 17-18 in Math.

3. **How does the district perform with growth?**

Growth can be reviewed with the MAP in 2016-17, 2017-18, and 2018-19. Results indicate that districts students showed below average growth in 2018-19 and 2016-17, but close to average growth in 2017-18. Growth for groups that tend to show achievement gaps were generally below average.

**4. How does the district perform relative to achievement gaps?**

Achievement gaps vary by attendance, race/ethnicity, gender, military, migrant, economic status, disability, and English Language learner status across the PEAKS and MAP. Achievement gaps for the MAP tended to be similar to the PEAKS, with some groups showing small gaps instead of medium gaps (Caucasian\* for example).

**5. How does the district perform relative to growth gaps?**

Growth gaps vary by race/ethnicity, gender, military, migrant, economic status, disability, and English Language learner status for the MAP. Growth gaps on the MAP were shown to be consistently and substantially smaller than achievement gaps on the MAP and PEAKS.

In summary, the district consistently performs well versus the state and is competitive with the “Big Four” and nation. Achievement gaps range from “less than small” to “large” in size and are similar in the PEAKS and MAP assessment with a few exceptions with smaller effect sizes for the MAP. PEAKS and MAP Math results both showed a decrease in 2018-19 vs. 2017-18. Growth results show below average growth in 2018-19. Growth gaps on the MAP were shown to be significantly smaller than achievement gaps, but the demographics groups were showing growth that was below the national average.