Representation Matters

Data Analytics Engineer Technical Challenge

Bourke Betz

Analytic Questions

- What is the current level of representation of students and educators of color?
- Have schools across the Road Map Region increased representation of educators of color during the time period? What types of schools have done so more or less?
- What schools have the highest/lowest representation of people of color among educators? Which schools have the most equal representation?

Representation of People of Color

during the 2021 academic year across the Road Map Region

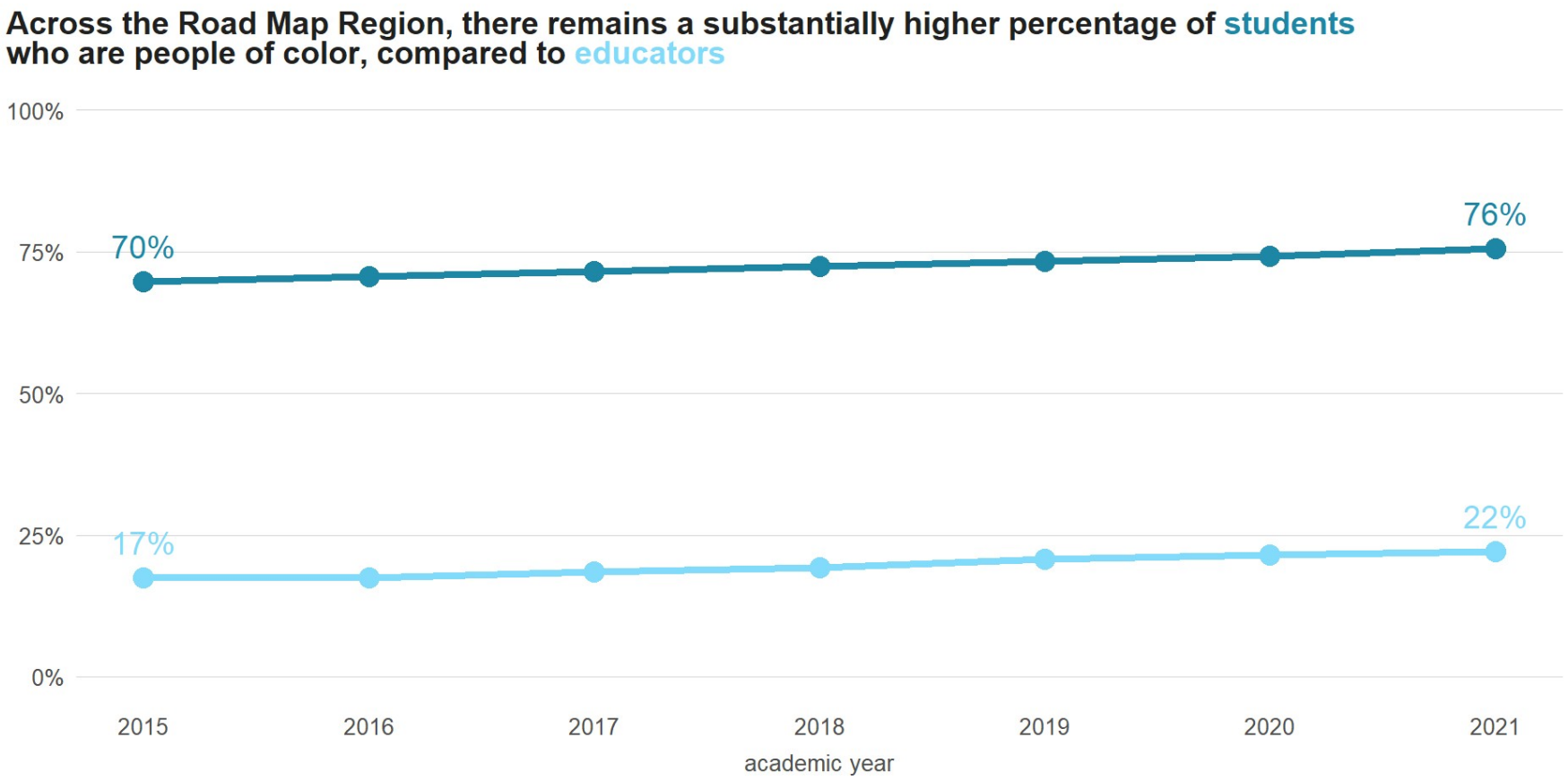
76% of students

but just

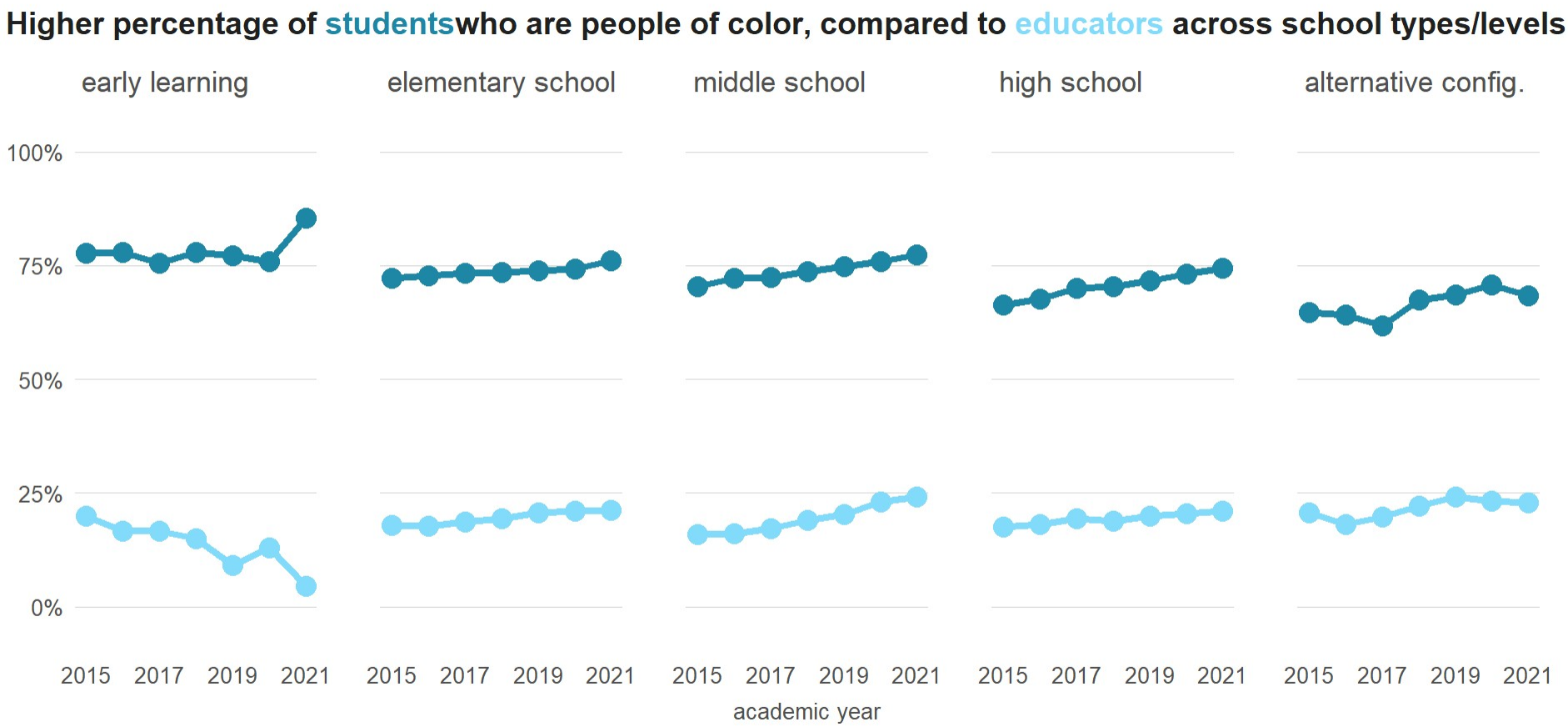
22% of teachers

Trends show small improvements

But a wide gap remains



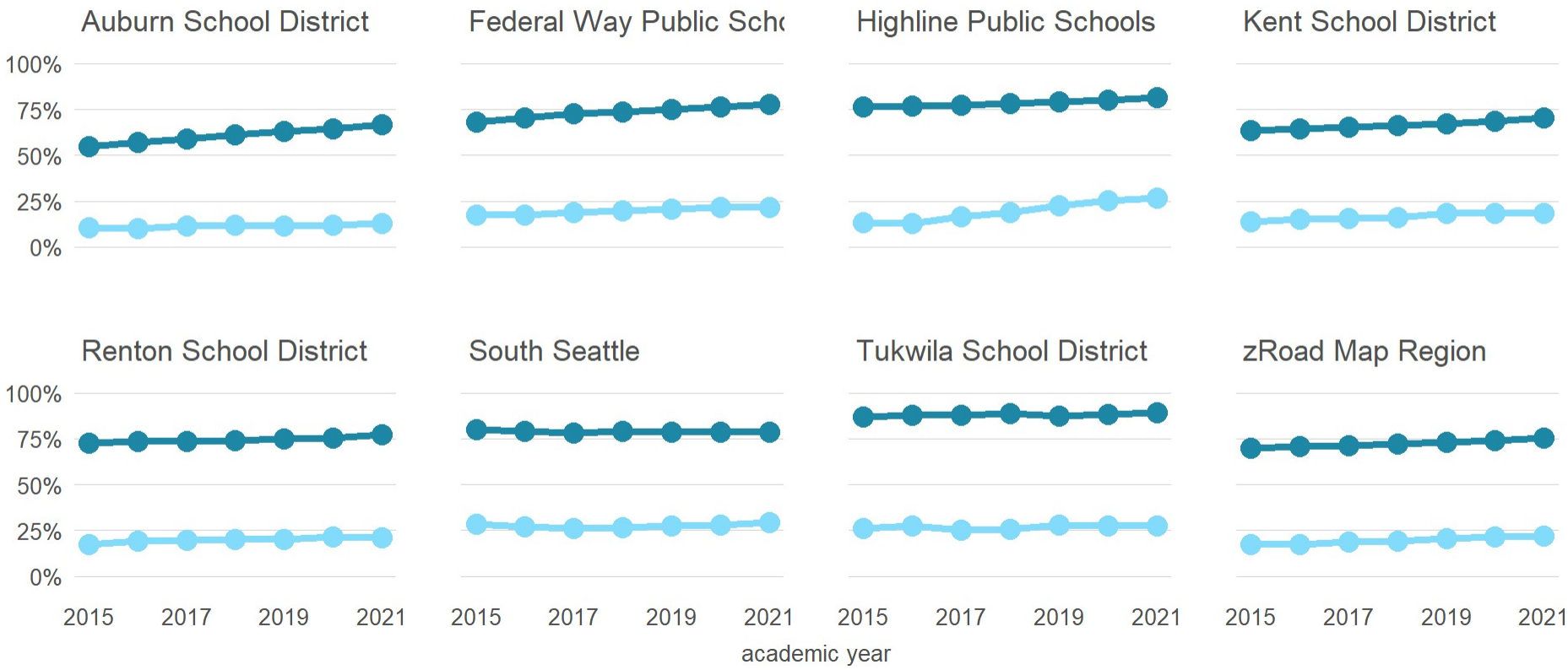
Comparison by school type & grade



School district comparison

Percentage of students who are people of color compared to educators

Progress in Federal Way, Highline, Kent, and Renton



Schools with highest percentages of teachers who are people of color

	% POC	
school	student	teacher
Rainier Valley Leadership Academy	97%	79%
Beacon Hill International School	82%	52%
Chinook Middle School	90%	51%
Hilltop Elementary	94%	48%
Dunlap Elementary School	98%	48%
Madrona Elementary	95%	46%
Glacier Middle School	90%	45%
Rising Star Elementary School	92%	45%
Concord International School	85%	44%
Cascade Middle School	91%	43%
Bailey Gatzert Elementary School	90%	42%
Summit Public School: Atlas	60%	41%

Schools with lowest percentages of teachers who are people of color

	% POC	
school	student	teacher
Crestwood Elementary School	52%	0%
Employment Transition Program	53%	0%
New Start	76%	0%
Seahurst Elementary School	85%	0%
The Outreach Program	65%	0%
Valley View Early Childhood Center	89%	0%
Puget Sound High School	0%	0%
Hazelwood Elementary School (Auburn)	61%	3%
Marvista Elementary	56%	3%
Glenridge Elementary	78%	3%
Sawyer Woods Elementary School	32%	4%
Kent Mountain View Academy	65%	6%

Most equal representation

Likely to be schools with relatively few POC among both

	% POC	
school	student	teacher
H.O.M.E. Program	16%	29%
Hawthorne Elementary School - Seattle	59%	41%
Rainier Valley Leadership Academy	97%	79%
Special Ed School	52%	33%
Summit Public School: Atlas	60%	41%
Gatewood Elementary School	32%	11%
Arbor Heights Elementary School	38%	13%
Lake View Elementary School	41%	15%
Madrona K-5 School	65%	38%
Sawyer Woods Elementary School	32%	4%
Summit Public School: Sierra	66%	37%
Beacon Hill International School	82%	52%

Questions for parent leaders

What outcomes do you think will be most impacted by increasing the # and % of educators of color?

Increasing representation everywhere is the vision. In the context of limited resources, where do we start?

1. Focus on saturating a subset of schools: for maximum impact for learners now (also great for evaluation)
2. A specific-level of school (for example, high school or elementary)
3. Some other strategy?

Additional directions

- People of Color are not a monolith: investigate representation of specific racial/ethnic groups
- Some investigation of counts (in addition to percents)
- Outcome evaluation: identify key metrics and compare schools with more equal representation of people of color versus those with less
- Look to schools/districts that have had more success in increasing representation for insights

Approach & Rationale

Methods

No statistical tests or modeling

- The disparity is obvious and substantial. Even the trends are fairly consistent.
- There are no learning outcomes in the data provided and the time alotted would be insufficient for modeling
- The audience is non-technical

Limited time calls for data mining –> high level analysis (aggregating subgroups)

Challenges

- duplication in the data (teacher experience & education)
- totals and sub-totals (sometimes rows, sometimes columns)
- limited time to emphasize or explore the depth of the data

Many possible **programming languages** and **reporting tools**: R and Quarto provide an efficient way to create presentations; facillitate collaboration; and promote transparency

Visualization

Data Exploration –> Munging –> More exploration –> Viz

- Big numbers
- Trends (highlighting small progress and making comparisons across relevant groups)
- Tables/heat maps for specific data points

Moving Forward