

Are Alaska teacher salaries competitive?

Matthew Berman & Dayna Jean DeFeo, February 2024

The importance of having good teachers in all schools cannot be overstated. Research consistently shows that good and experienced teachers support positive student outcomes including attendance (Gershenson, 2016; Liu & Loeb, 2021), test scores (Coenen et al., 2018; Darling-Hammond, 2000), and high school graduation (Burns, 2020). Research also shows that teaching – like any other activity – improves with experience and practice (Podolsky et al., 2019), but when teachers leave a job in a school, they are often replaced by new teachers with less experience. Frequent turnover creates instability in schools, harming the school climate (Allensworth et al., 2009; Guin, 2004; Kraft et al., 2016) and further contributing to teacher burnout (Arens & Morin, 2016; Hirshberg et al., 2014).

When we think about staffing Alaska’s schools, we have two aims:

1. Attract the best teachers to Alaska and keep them here;
2. Ensure that all schools in Alaska have the ability to attract and retain good teachers.

Why do teachers come? Why do teachers stay?

Aside from personal preferences and circumstances of the teachers (which we don’t seek to manage or control), the drivers of teacher recruitment and retention basically boil down to two things: compensation and working conditions. Compensation includes a teacher’s salary and benefits, which include monetary benefits (like health insurance premiums) as well as non-monetary benefits (like personal leave days). Working conditions may include a variety of things like relationships with the community, class size, leadership, collegial relationships, access to technology and teaching materials, and the physical space. We’ll address working conditions later; first, let’s look at compensation.

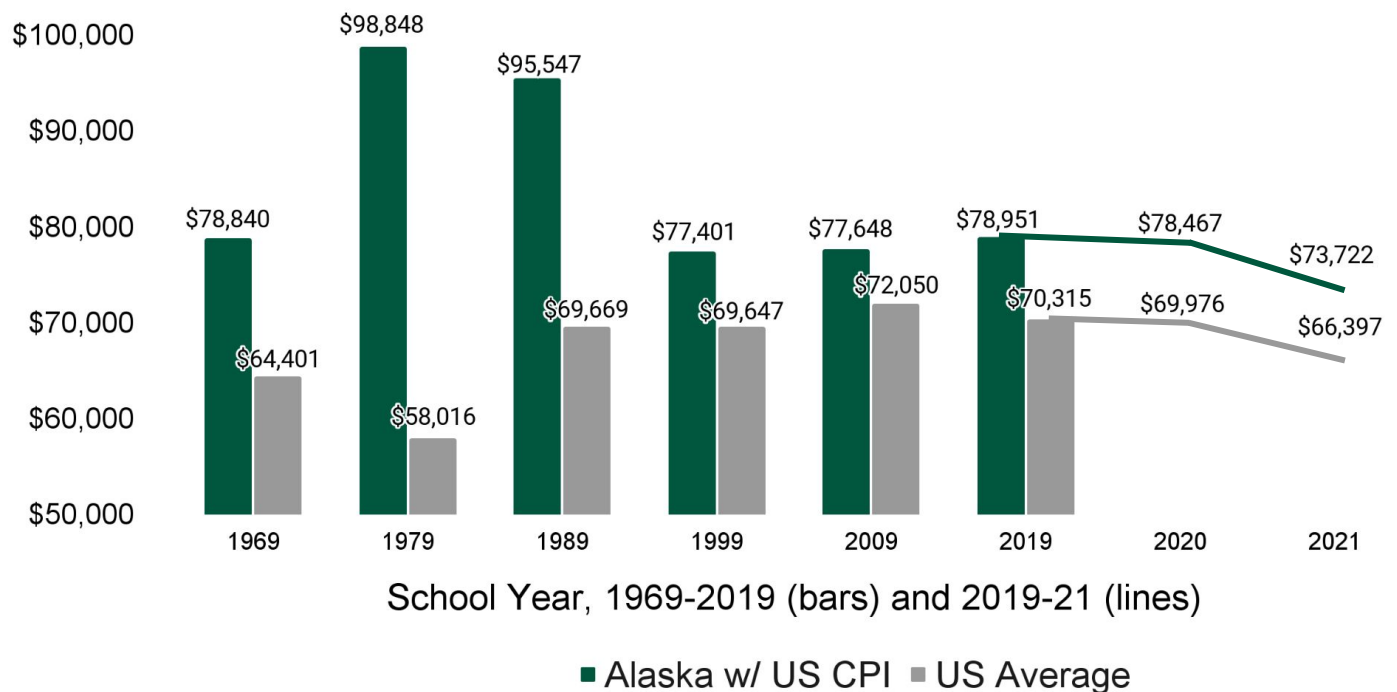
Why do we need competitive teacher salaries?

There are several teacher preparation programs in Alaska, but Alaska’s programs have never graduated enough teachers to fill the state’s hiring needs, and some leave to take jobs in other states. That means that Alaska hires teachers in a national market; in other words, we need to attract teachers from “the lower 48” to work in Alaska’s schools. This has always been a challenge, but the challenge has grown lately because the nation is experiencing a teacher shortage that has been termed a “crisis” (Pettypiece, 2023). Across the nation, fewer people are choosing teaching as a career (Will, 2023), the profession is experiencing high turnover, and contemporaneously, schools are adding teaching positions and looking to hire more teachers (Diliberti & Schwartz, 2023; García et al., 2022). In this climate, Alaska salaries need to be competitive within a shrinking national pool.

How do Alaska salaries compare?

A recent article in *Alaska Economic Trends* (Warren, 2023) noted that Alaska teacher salaries are 11% higher than the US average, making it the 10th highest paid state (see Figure 1). However, Alaska teacher salaries were much higher relative to the national average before 2000, and they have not kept up with inflation recently. This is true, but it is only the beginning of the story. A gallon of milk costs more in Anchorage than it does in Albuquerque. And it costs more in Nome than it does in Anchorage. And it costs more in a village than it does in a hub like Nome. Teachers live in communities where they work, and their salaries need to be appropriate to the local context in which they buy goods and services. So, we need to adjust for different living costs to make a fair comparison. If we look at Alaska teacher salaries in this context, how do they measure up?

Average Alaska and US Teacher Salaries, 1969-1970 to 2021-22, Adjusted to Constant 2021-22 Dollars using the US CPI



This figure depicts the average teacher salaries in the US and in Alaska, controlling for inflation using the US Consumer Price Index (CPI). It shows that Alaska salaries (green bar) were 70 percent higher than the US average (gray bar) in 1980, but since about 2000, they've hovered at just over 10 percent above the national average. The switch from bars to lines indicates a different time frame. Where the bars on the left indicate decade-to-decade changes, the lines reflect these same calculations for the three most recent years for which data are available.

Adjusting for Cost of Living Differences

Adjusting pay for geographic differences in the cost of living is a common thing to do. For example, federal government workers - including military personnel - get location adjustments to their pay, based on where they live. Lots of other companies make these adjustments as well. So, to assess whether Alaska teacher salaries are competitive in the national market for teachers, we applied three adjustments to teacher salaries (see Figures 2 and 3):

Box 1: How has Alaska's Consumer Price Index changed over time?

The Consumer Price Index (CPI) looks at the way prices change over time. The US CPI describes how inflation affects consumer prices in the US as a whole, but inflation may proceed at different rates in certain regions. In the 1970s, Anchorage was more expensive relative to the US than it is now. During the period of rapid inflation between 1980 and 1990, the US CPI went up by 64%, but the Anchorage CPI only increased by 41%. Anchorage was growing rapidly in the 1980s, which enabled retail and wholesale businesses to expand as well, which dramatically reduced the costs of logistics and warehousing.

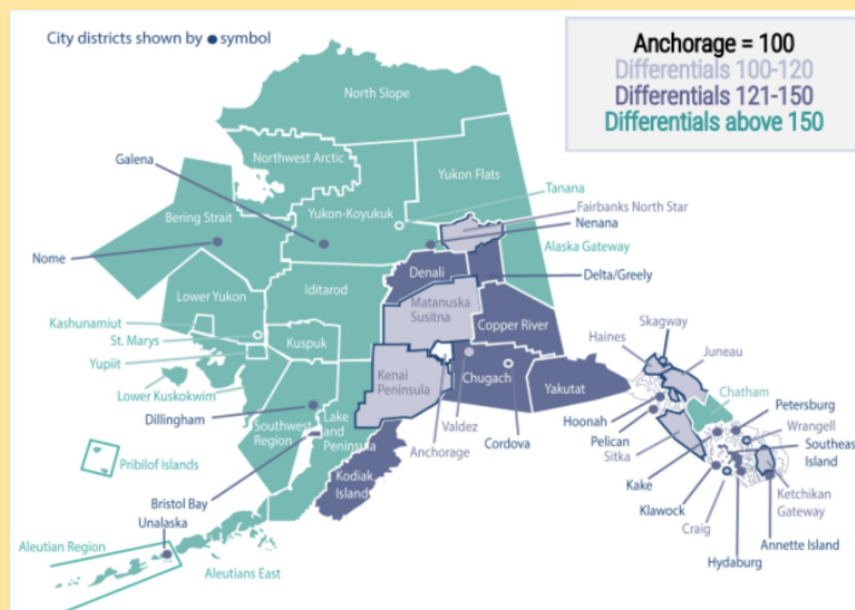
Adjusting for inflation and the Consumer Price Index: Costs increase over time, due to inflation. The figures for average teacher salaries in Alaska and the US as a whole in Figure 1 are adjusted to 2021-22 price levels using the US Consumer Price Index (CPI). However, inflation rates across different parts of the state are not the same. They are affected by changes in the relative cost of living due to local economic shifts (see Box 1).

Adjusting to Anchorage: Within Alaska, costs differ significantly between communities, so the next step of our analysis adjusts Alaska's teacher salaries to account for the higher costs of living relative to Anchorage in Alaska's different school districts. To do this, we used the Foundation Formula's district cost factor, and weighted by the number of teachers in that district to compute the weighted average (see Box 2). We calculated an average district cost factor based on the geographic cost differential that the state uses to allocate funds to school districts, adjusted for the number of teachers teaching in that district. Then we used that average cost factor to calculate an Anchorage-adjusted average teacher salary.

Adjusting Anchorage price levels: Even after adjusting Alaska communities to Anchorage, we still cannot directly compare to the nationwide average because Anchorage's cost of living is higher than most other communities in the US. We applied the most widely used cost of living index (COLI), published by the Council for Community and Economic Research (C2ER, formerly the American Council for Community and Economic Research [ACCRA])^[1] to our statewide calculations.

Box 2: What are Alaska's district cost factors?

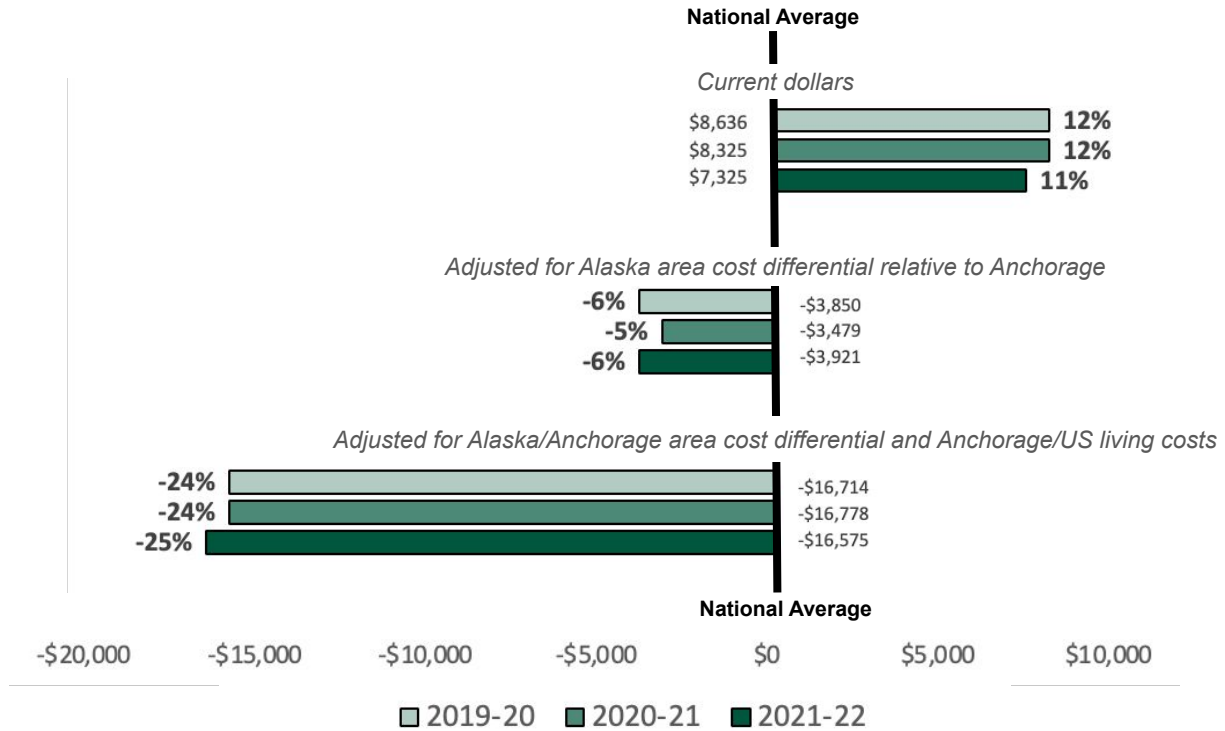
The district cost factor indicates how much more it costs to provide the same educational services in Alaska's communities as compared to Anchorage. Factors influencing the cost differential include the higher costs of attracting quality teachers and administrators to rural areas, transportation costs for personnel and supplies, and energy costs. Relative to Anchorage, 31 Alaska districts have cost differentials between 1.07 and 1.49, meaning that it costs 107% to 149% more to operate schools in those communities. Twenty-one districts have cost differentials of 1.5 or greater, meaning that it costs at least one-and-a-half times as much to operate schools in those places (see Figure 3). Alaska's district cost factor differentials were last updated in 2005 (see Tuck et al., 2005), and some Alaska communities have notably changed since then. In 2015, ISER updated community cost differentials for instructional salaries (see Hirshberg et al., 2015), but these calculations have not been applied to the School Foundation Formula.



Even within a single district, costs of operating schools in rural villages and rural hubs differ significantly. These district cost differentials are a weighted average of the lower costs in hubs and higher costs in villages.

Figure 2

Alaska Teacher Salaries Compared to the US Average, 2019-22, Adjusted for Cost of Living Differences

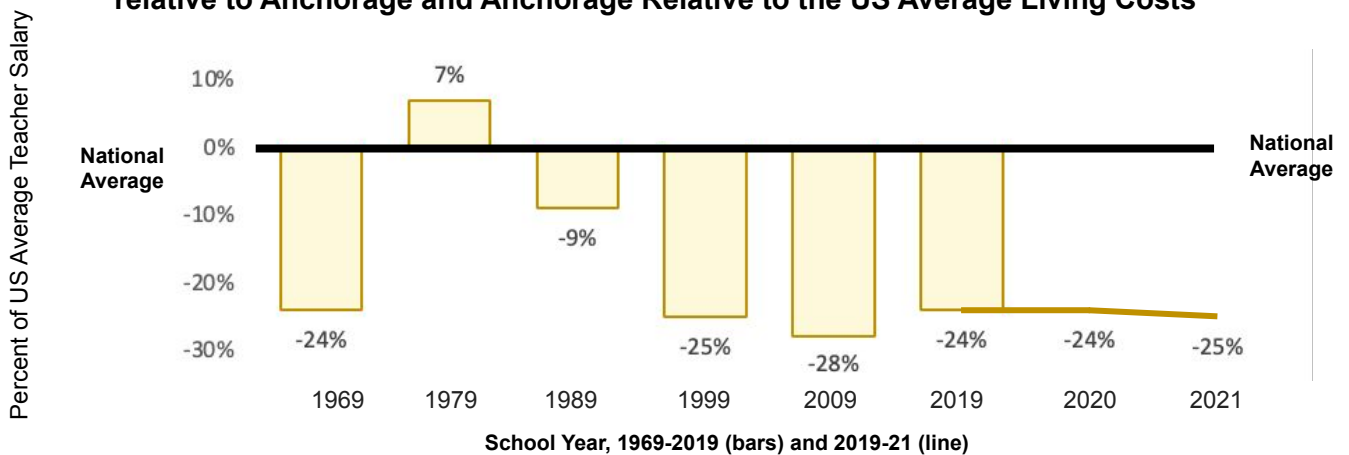


Sources: National Center for Education Statistics, Alaska Department of Education and Early Development, and the Council for Community and Economic Research

This figure shows how we adjust Alaska salaries for two different types of living cost differences for the most recent three years where the data are available. The top group of bars depict the Alaska average teacher salaries with no adjustments. The middle bars reflect the effects of adjusting the Alaska/Anchorage area cost differential. The bottom bars reflect the additional adjustments for the C2ER Anchorage to US average differential.

Figure 3

Alaska Average Teacher Salary as a Percentage of the US Average, Adjusted for Alaska relative to Anchorage and Anchorage Relative to the US Average Living Costs



Sources: National Center for Education Statistics, Alaska Dept. of Education and Early Development, and the Council for Community and Economic Research

This chart shows reflects how the bottom group of bars in Figure 2 (which depict adjustments for the higher costs of living across Alaska as a whole relative to Anchorage, and Anchorage relative to the US average), have evolved over the past several decades. They show that Alaska teacher salaries were higher than the national average in the late 1970s and early 1980s, and have been substantially below the national average since 2000.

What does this mean for teachers and schools?

- **Alaska’s teacher salaries are not nationally competitive.** This is not a new problem: Alaska teachers have been paid less than the national average, adjusting for different living costs, for at least the past 20 years. What *has* changed recently is that teacher salaries across the US have lagged behind inflation, contributing to a national teacher shortage. In this environment, below-average teacher salaries in Alaska make it that much more difficult for Alaska schools to fill open positions. If Alaska wishes to attract and retain educators who are well qualified for teaching, it needs to make investments in teacher pay.
- **Lower average salaries are a particular challenge for Alaska’s rural schools.** Previous ISER research has indicated that a number of districts in Southcentral and Southeast Alaska are paying high enough salaries to attract and retain qualified teachers; however, salaries in most rural districts fall far short of competitive levels (Berman & DeFeo, 2023; Hirshberg et al., 2015). In the current environment of a statewide teacher shortage, rural districts will have to increase salaries even more than urban districts to be able to fill vacant positions.
- **High operating costs in our education system leave districts with less money to put into teacher salaries.** Our analysis looks at salaries only (not total compensation), but other work notes that the high costs of benefits in Alaska – especially healthcare – put downward pressure on wages (Passini et al., 2018). When school districts have to spend a lot of their budgets to offer competitive benefit packages to teachers and the benefits also cost more than they do in other places, this means that they have less money left over for teacher salaries. Districts also have to keep schools warm and the lights on, and fuel price increases have hit rural districts particularly hard.
- **Compensation systems should recognize career pathways and provide incentives for long-term commitments to teaching in Alaska.** It is important to note that teachers earn raises through incremental steps – not big promotions – and this is different from many other jobs. Attracting and retaining high quality educators in Alaska requires thinking about teacher salaries and teachers’ earning potential over their whole career.
- **We will not get out of this teacher shortage with salaries alone.** Research has consistently shown that working conditions also drive teacher turnover (Berman & DeFeo, 2023; DeFeo et al., 2018; Geiger, & Pivovarova, 2018; Simon & Johnson, 2015). But without competitive salaries, we cannot expect teachers to come, nor to stay.

[i] There are several options for calculating COLI. We use the C2ER COLI. It is designed to assist firms with adjusting compensation for managers that get reassigned to new communities, making it a good reference point for teachers and other professional workers. Other locality adjustments include the US Bureau of Economic Analysis (BEA) *GDP Price Deflator*, and the *BEA Regional Purchasing Parity (RPP) index*. The *GDP Deflator* is based on BEA’s definition of Personal Income, which includes employer-provided benefits and the rental value of owner-occupied homes as income. Since Alaska’s health care and housing costs are much higher than the national average and the BEA deflator leaves out these components, it is a poor choice for comparing teacher salaries. The RPP uses the Anchorage CPI prices for some things, but uses national average prices to represent Alaska’s much higher health care prices, and derives housing prices from the American Community Survey (ACS). The ACS doesn’t take into account the effect of housing quality on rents in rural Alaska.

About the Authors

The authors are solely responsible for the content of this summary. Matthew Berman is an ISER professor of economics. Dayna DeFeo is an ISER associate professor of education policy and the director of ISER's Center for Alaska Education Policy Research.

Matthew Berman, Professor of Economics. Matthew has been on ISER's faculty since 1981. His research includes studies of economic organization, political economy, and social change, especially in Alaska and Arctic communities. A current focus of his research is measuring indicators of community adaptive capacity, well-being, and resilience. His recent publications examine, among other things, the effects of universal basic income. He teaches UAA economics and interdisciplinary social science courses.

Dayna Jean DeFeo, Research Assistant Professor and Director, CAEPR. Dayna has worked at ISER's Center for Alaska Education Policy Research since 2014 and became the director in 2017. Her current research interests include college and postsecondary transitions, particularly in the career and technical fields and for underrepresented populations; teacher turnover, supply, and demand; STEM education; and representation and equity in the curriculum and institutional systems.

References

- Allensworth, E., Ponisciak, S., & Mazzeo, C. (2009). *The schools teachers leave: Teacher mobility in Chicago public schools*. Chicago IL: Consortium on Chicago School Research.
- Arens, A. K., & Morin, A. J. S. (2016). Relations between teachers' emotional exhaustion and students' educational outcomes. *Journal of Educational Psychology, 108*(6), 800-813.
- Berman, M., & DeFeo, D. J. (2023). Equitable compensation to attract and retain qualified teachers in high-need Alaska public schools. *Educational Policy, 08959048231174883*.
- Burns, E. C. (2020). Factors that support high school completion: A longitudinal examination of quality teacher-student relationships and intentions to graduate. *Journal of Adolescence, 84*, 180-189.
- Coenen, J., Cornelisz, I., Groot, W., Maassen van den Brink, H., & Van Klaveren, C. (2018). Teacher characteristics and their effects on student test scores: A systematic review. *Journal of Economic Surveys, 32*(3), 848-877.
- Darling-Hammond, L. (2000). Teacher quality and student achievement. *Education Policy Analysis Archives, 8*, 1-1.
- DeFeo, D.J., Hirshberg, D., & Hill, L. (2018). It's more than just dollars: Problematizing salary as the sole mechanism for recruiting and retaining teachers in rural Alaska. *Alaska Native Studies Journal 4*(1).
- Diliberti, M. K., & Schwartz, H. L. (2023). Educator turnover has markedly increased, but districts have taken actions to boost teacher ranks: *Selected findings from the sixth American school district panel survey*. (Report No. RR-A956-14, 2023). RAND Corporation.
- García, E., Kraft, M. A., & Schwartz, H. L. (2022). *Are we at a crisis point with the public teacher workforce? Education scholars share their perspectives*. The Brookings Institution. Retrieved from <https://www.brookings.edu/articles/are-we-at-a-crisis-point-with-the-public-teacher-workforce-education-scholars-share-their-perspectives/>
- Geiger, T., & Pivovarov, M. (2018). The effects of working conditions on teacher retention. *Teachers and Teaching, 24*(6), 604-625.
- Gershenson, S. (2016). Linking teacher quality, student attendance, and student achievement. *Education Finance and Policy, 11*(2), 125-149.
- Guin, K. (2004). Chronic teacher turnover in urban elementary schools. *Educational Policy Analysis Archives, 12*(42), 1-30.
- Hirshberg, D., Berman, M., DeFeo, D. J. & Hill, L. (2015). *Salary & benefits schedule and teacher tenure study* (Report No. 1584). Anchorage, AK: Institute of Social and Economic Research.
- Hirshberg, D., Hill, L., & Kasemodel, C. (2014, April). *Will they stay or will they go? Teacher perceptions of working conditions in rural Alaska*. Paper presented at American Educational Research Association annual meeting, Philadelphia, PA.
- Kraft, M. A., Marinell, W. H., & Yee, D. (2016). Schools as Organizations: Examining School Climate, Teacher Turnover, and Student Achievement in NYC. Brief. *Research Alliance for New York City Schools*.
- Liu, J., & Loeb, S. (2021). Engaging teachers: Measuring the impact of teachers on student attendance in secondary school. *Journal of Human Resources, 56*(2), 343-379.

- Passini, J., Frazier, R., & Guettabi, M. (2018). *Trends in Alaska's healthcare spending*. (Report No. 1343). Anchorage, AK: Institute of Social and Economic Research.
- Pettypiece, S. (2023, August 13). *From 'crisis' to 'catastrophe,' schools scramble once again to find teachers*. NBC News. Retrieved from <https://www.nbcnews.com/politics/economics/crisis-catastrophe-schools-scramble-find-teachers-rcna98083>
- Podolsky, A., Kini, T., & Darling-Hammond, L. (2019). Does teaching experience increase teacher effectiveness? A review of US research. *Journal of Professional Capital and Community*, 4(4), 286-308.
- Simon, N., & Johnson, S. M. (2015). Teacher turnover in high-poverty schools: What we know and can do. *Teachers College Record*, 117(3), 1-36.
- Tuck, B., Berman, M., & Hill, A. (2005). Alaska school district cost study update. (Report No. 1115). Anchorage, AK: Center for Alaska Education Policy Research.
- Warren, J. (2023). Teachers' shrinking wage advantage: Alaska used to pay the most, but now we're tenth. *Alaska Economic Trends*, 12, 14-17.
- Will, M. (2023, August 28). What teacher-preparation enrollment looks like, in charts. *Education Week*. Retrieved from <https://www.edweek.org/teaching-learning/what-teacher-preparation-enrollment-looks-like-in-charts/2023/08>