



# POLICY BRIEF

## TEACHER RETENTION AND TURNOVER DURING THE COVID-19 ERA

How changes in attrition differed across teachers and schools in Washington State

### INTRODUCTION

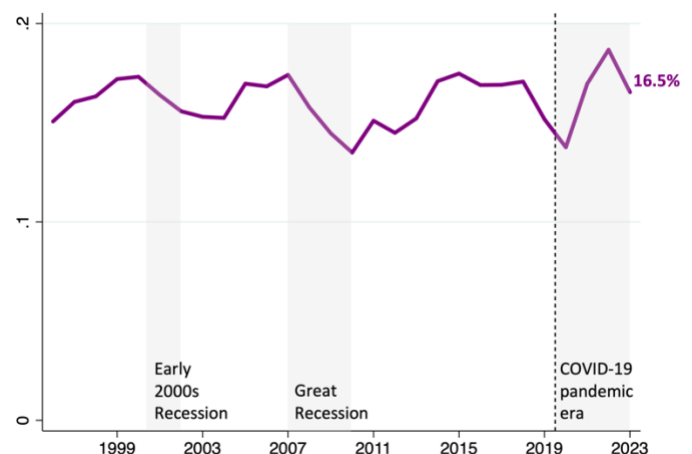
The COVID-19 pandemic fundamentally altered public K-12 education, causing widescale staff shortages during much of the 2020-21 and 2020-22 school years. While the pandemic brought new challenges, many districts have faced high teacher turnover long before the pandemic, and educator attrition does not impact all schools equally.<sup>i</sup>

Figure 1 displays the average teacher turnover rate for schools in Washington, using data up to the 2023-24 school year. The figure shows historical declines in turnover during economic recessions, as well as a sharp, unprecedented increase during the COVID-19 pandemic era. Consistently high educator turnover disrupts school relationships, adds new costs associated with hiring and training, and harms student learning environments.<sup>ii</sup> To address high rates of attrition, system leaders need a clear understanding of how turnover has changed over time, what types of teachers and students are most impacted, and what action steps may be useful for improvement.

In this brief, we describe an analysis of teacher turnover in Washington State during the COVID-19 era and offer recommendations for addressing educator turnover, particularly in schools that have historically faced higher rates of teacher attrition.

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**Figure 1.** Annual teacher turnover in Washington State, 1995-96 to 2023-24

### BACKGROUND

Over the past two decades, a body of literature examining the teacher labor market has identified several key insights: (a) teachers play an instrumental role in shaping the learning of students, but the most qualified teachers are not equitably distributed across schools; (b) teacher labor markets are localized, meaning when teachers search for new teaching positions, they typically consider jobs within their current commuting zone, and (c) the inequitable distribution of “teacher quality” results from differences in teacher hiring, development, and turnover.<sup>iii</sup>

Studies show teachers are more likely to leave schools with limited administrative support and opportunities for professional growth, fewer collegial relationships, and where the salary is not commensurate with that of surrounding school districts.<sup>iv</sup> Due to a multitude of factors,

these characteristics are more common in schools enrolling higher percentages of students who identify as Black, Indigenous, or other Person of Color (BIPOC), as well as schools serving higher-poverty student populations. As a result, students of color and low-income students are disproportionately impacted by higher teacher turnover, are inequitably assigned to novice teachers, and experience a teacher quality gap when compared to their more advanced peers. High turnover makes it difficult for schools to promote cultural competence among teaching staff and can disrupt efforts to diversify the teacher workforce.

The underlying drivers of teacher’s career path decisions are complex and multifaceted. The rates at which teachers leave their jobs can vary significantly based on a variety of teacher attributes, such as race/ethnicity, gender, years of experience, salary, and level of education. Additionally, school characteristics play a crucial role; these can include the school’s location and size, the socioeconomic status of the surrounding neighborhoods, and the demographics of the student populations. Finally, the overall policy context shapes the level of support and resources available.

In the subsections below, we describe the data and methodology used for this brief. We then describe findings and offer policy recommendations for district and state education leaders.

## DATA AND METHODOLOGY

We utilize a comprehensive, longitudinal record of educational employment in Washington called the S-275, which currently offers four decades of yearly information on teachers and additional school staff within the state. The data span school years 1995-96 to 2023-24. Our sample includes 1.6 million teacher-year observations including 160,000 unique teachers across 2,977 schools in 295 districts.

In our analysis, we employ regression models as a statistical tool to understand teacher, school, and policy-related factors that may precede and potentially influence teacher attrition. At the teacher level, we consider a range of variables such as gender, race/ethnicity, the number of years they have spent teaching, their salary levels, and the specific grades they teach. These individual characteristics can provide insights into the trends and patterns associated with teachers' decisions to remain in or leave their positions.

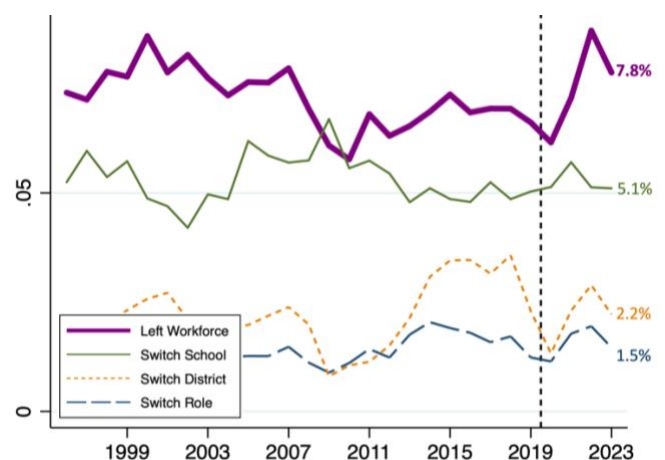
At the school level, we looked at factors that describe the broader environment in which teachers work. These include the level of poverty among the student body, the percentage of students who identify as Black, Indigenous,

and People of Color (BIPOC), school grade levels, and the overall size of the school. These school characteristics can have significant effects on job satisfaction and turnover rates, as they often influence the resources available, the nature of the teaching position, and the support systems in place for educators.

To better understand for unobserved “heterogeneity,” or differences in relationships across contexts, we utilize fixed effects models for both teachers and schools. By incorporating teacher fixed effects, we control for all time-invariant teacher-specific factors that could affect attrition. For example, teacher fixed effects models can compare the likelihood a teacher leaves a higher-poverty school setting, relative to the likelihood that same teacher leaves a lower-poverty school. By comparing the same teacher in different school contexts, we control for unobserved, unchanging teacher factors about the teacher.

Similarly, school fixed effects models control for all unchanging characteristics of schools. These models allow us to compare teachers working in the same school. For example, school fixed effects models compare the likelihood that a male teacher leaves their school, compared to a female working *in the same school*. Similarly, school fixed effects models can examine how teacher turnover rates change over time in the same school as the student population changes, for example, becoming more or less diverse.

In summary, our regression models with fixed effects are designed to provide a nuanced understanding of the precursors to teacher attrition by controlling for a broad range of constant individual and school factors, thus highlighting the effects of specific variables of interest.



**Figure 2.** Annual teacher attrition in Washington State by turnover type, 1995-96 to 2023-24

## FINDINGS

Results are displayed in Figure 1, described above, Figures 2 through 4 and Table 1 and 2 below. Figure 2 breaks down the general teacher turnover rate into various categories of departures. This includes teachers transferring to different schools in the same district, different districts, those departing from teaching roles but staying within the K-12 education system, and those completely leaving the public K-12 system. A clear takeaway from Figure 2 shows that the recent increase in turnover is driven largely by teachers leaving the workforce all together. The transition from school year 2021-22 to 2022-23 also showed increases in the percent of teachers switching districts or leaving the teaching position.

The pattern of teachers switching schools within the same district has changed over time. From around 2003 to 2009, the rate of school switching increased to about six to seven percent, and in 2009 represented the largest contributor to teacher turnover. In recent years, school switching has stabilized to around five percent, while teachers exiting the workforce altogether is now the largest source of teacher attrition. This pattern relates in part to the demographics of the teacher workforce. In 2009, when school switching was the lead cause of teacher attrition, the state's teacher workforce was relatively less experienced and fewer teachers were retiring (Figure 3). The percent of teachers nearing retirement slowly increased from about 2% in 1995, peaked in 2012 at about 8%, and has declined ever since up until the last few years.

Table 1 shows the rates of different types of teacher turnover both before and during the pandemic, overall, and for different student groups. The first row shows that in the two years leading up to the pandemic, 16% of teachers left their school at the end of each year, on average, and most left the K-12 system entirely (6.8%). We calculate the school turnover rate for the typical student who identifies within each racial/ethnic group, and who is classified as low-income, multi-language learner, or who is enrolled in special education.<sup>v</sup> Teacher turnover rates are more than 1.5 percentage points greater (more than 10% higher) for the average student who identifies as American Indian/Alaskan Native, Black, or Pacific Islander/Native Hawaiian, with rates closer to the state average for the typical student who identifies as Hispanic/Latine/o, more than one race, or White. The top panel of Table 1 shows students classified as low-income and students who are multi-language learners similarly attended schools with substantially higher teacher turnover rates, on average, during the pre-COVID era, with rates 0.9 and 1.8 percentage points greater than the state mean, respectively.

**Table 1. Annual teacher turnover rate by average student characteristics, 2017-18 to 2019-20 and 2020-21 to 2022-23**

	Leave school	Diff., state avg.	Leave school			
			Switch school	Switch district	Switch roles	Exit K-12
<b>Panel A. Tch. job trans. in two pre-COVID years (2017-18 to 2019-20)</b>						
All stu./sch.	16.1%	--	4.9%	2.9%	1.5%	6.8%
Am. I./ AK N.	19.8%	3.7%	4.2%	5.1%	1.8%	8.7%
Asian	16.8%	0.7%	5.0%	3.1%	1.7%	7.1%
Black	18.8%	2.7%	5.2%	3.8%	2.0%	7.8%
Hisp./ Lat.	16.6%	0.5%	5.0%	3.4%	1.6%	6.7%
Pc. Is./ N. HI	17.7%	1.6%	4.9%	3.9%	1.7%	7.2%
More one r.	16.4%	0.3%	4.8%	3.1%	1.4%	7.1%
White	15.1%	-1.0%	4.4%	2.8%	1.3%	6.6%
Low income	17.0%	0.9%	5.0%	3.5%	1.6%	6.9%
Non low inc.	15.2%	-1.0%	4.4%	2.7%	1.3%	6.7%
Mult. In. Irn.	17.9%	1.8%	5.6%	3.7%	1.8%	6.8%
Special Educ.	16.6%	0.5%	5.1%	3.1%	1.5%	6.9%
<b>Panel B. Tch. job trans. during two COVID years (2020-21 to 2022-23)</b>						
All stu./sch.	17.8%	--	5.4%	2.6%	1.9%	8.0%
Am. I./ AK N.	21.2%	3.4%	4.3%	4.4%	2.5%	10.0%
Asian	18.6%	0.8%	5.5%	2.5%	1.8%	8.7%
Black	19.8%	2.0%	5.3%	3.0%	2.4%	9.1%
Hisp./ Lat.	17.4%	-0.4%	5.0%	2.9%	2.0%	7.6%
Pc. Is./ N. HI	19.1%	1.2%	5.9%	3.0%	2.2%	7.9%
More one r.	18.1%	0.3%	5.4%	2.6%	1.9%	8.3%
White	17.1%	-0.7%	4.9%	2.6%	1.7%	8.0%
Low income	18.2%	0.4%	5.3%	2.9%	2.0%	7.9%
Non low inc.	17.2%	-0.6%	4.9%	2.5%	1.7%	8.2%
Mult. In. Irn.	18.3%	0.5%	5.5%	2.8%	2.1%	7.9%
Special Educ.	17.8%	0.0%	5.3%	2.7%	1.9%	8.0%

Note. n = 254,359 teacher-year observations over four years.

Panel B of Table 1 shows the statewide turnover rate increased to about 18% in the two most recent years. As discussed earlier, the largest increase in turnover during the COVID era is among teachers leaving the K-12 system entirely (see Figure 2). The bottom portion of Panel B shows that racial and economic gaps in teacher turnover persisted through the pandemic but did not expand substantially.

Next, we examine in greater detail teacher and contextual factors associated with educator turnover. Table 2 shows regression coefficients for three regression models. We first estimate the likelihood an individual teacher leaves their school at the end of the school year, based on teacher, school, and district factors, drawing on data from 2014-15 to 2022-23. The first coefficient, -0.036, suggests that teachers in their second to fifth year are 3.6 percentage points less likely to leave their school than teachers in their first two years (the reference group). Teachers become even less likely to leave their posts in the next two phases of their career 6-10 years and 11-30 years, whereas those nearing retirement have turnover similar to novice teachers.

**Table 2. Teacher and school factors associated with teacher turnover, 2014-15 to 2022-23**

	(1)	(2)	(3)
<i>Years of experience</i>			
2-5 years	-0.036*** (0.00)	-0.031*** (0.00)	0.015*** (0.00)
6-10 years	-0.061*** (0.00)	-0.052*** (0.00)	0.008* (0.00)
11-25 years	-0.103*** (0.00)	-0.090*** (0.00)	-0.026*** (0.01)
>25 (ref.= <2 years)	-0.002 (0.00)	0.014*** (0.00)	0.073*** (0.01)
<i>Race/eth., gender</i>			
Black	0.037*** (0.01)	0.033*** (0.01)	
Latina/o	-0.009* (0.00)	0.001 (0.00)	
More than one	0.011* (0.01)	0.010* (0.01)	
White (ref.= Asian)	0.009** (0.00)	0.012*** (0.00)	
Male (ref.= female)	-0.013*** (0.00)	-0.013*** (0.00)	
<i>School grade level</i>			
Middle school	-0.001 (0.00)		-0.066*** (0.01)
High school	-0.028*** (0.00)		-0.136*** (0.01)
P-12	0.033*** (0.01)		-0.028* (0.01)
Other (ref.= elem)	0.016*** (0.00)		-0.031*** (0.01)
<i>School demographics</i>			
% low-income	0.020*** (0.00)	-0.024 (0.01)	0.093*** (0.01)
% Stu. of Color	0.041*** (0.00)	0.011 (0.02)	0.219*** (0.01)
<i>District locale and size</i>			
Suburban	-0.006*** (0.00)		0.030*** (0.01)
Town	-0.007*** (0.00)		0.024** (0.01)
Rural (ref.= urb.)	-0.009** (0.00)		0.035** (0.01)
500-2,500 students	-0.013** (0.00)		0.017 (0.01)
2,500-5,000 stud.	-0.025*** (0.01)		0.004 (0.01)
>5,000 (ref.= <500)	-0.015** (0.01)		-0.009 (0.01)
R-squared	0.383	0.392	0.580
N	461,590	461,590	461,590
Year FE	X	X	X
School FE		X	
Teacher FE			X

Note. \*\*\* p<.001, \*\* p<.01, \* p<.05.

The next set of coefficients in model 1 of Table 2 shows that teachers who identify as Black, as more than one race, or as White have higher turnover rates than those who identify as

Asian and Latina/o, while male teachers are 1.3 percentage points less likely to exit their school than female teachers.

The bottom portion of Table 2 shows coefficients for school and district factors. Results in Model 1 show middle schools have similar turnover to elementary schools, while high schools have turnover rates 2.8 percentage points higher than elementary schools. The next two rows show students classified as low-income and those who identify as a person of color are disproportionately exposed to higher teacher turnover, even after controlling for teachers and school characteristics. Finally, schools in suburban, town, and rural, districts have lower turnover than those in urban districts, while smaller districts tend to have higher turnover rates.

The second column of Table 2 shows regression coefficients for a model that adds school fixed effects, allowing us to compare teachers working in the same school, the same year. The first set of coefficients shows that the same U-shaped relationship exists with respect to teacher years of experience and turnover when comparing teachers working in the same school. We also find a similar pattern teacher turnover by \ race/ethnicity when we compare teachers in the same school, suggesting that school context is not a main driver racial/ethnic differences in teacher turnover, or of differences related to career stage. Coefficients for school demographics in model 2 (-0.024 and 0.011) are not significant, suggesting changes in a school's student demographics over time are not predictive of teacher turnover. In other words, while schools serving higher percentages of students of color and low-income students have higher educator turnover rates, the student population is probably not the key driver of this relationship, since changes over time within the same school do not influence turnover rates. Instead, a third variable correlated with both student demographics and teacher turnover, such as teacher professional supports or autonomy, may be correlated with both student demographics and turnover. This finding is consistent with research showing teachers prefer work environments that provide a "sense of success."

The third column in Table 2 shows results for a model that includes teacher fixed effects, examining the influence of different teacher and school characteristics on turnover, for an individual teacher over time. The first two coefficients suggest that early and mid-career teachers are 1.5 and 0.8 percentage points more likely than novice teachers to leave their school (among those who are observed as both novice and early and/or mid-career stages). A limitation of teacher fixed effects models is that the results are based on a narrower set of teachers. For example, many novice teachers leave in their first or second year. The teacher fixed effect model examines whether a teacher is more likely to exit their school during their novice year or their

early or mid-career, or later. Those coefficients do not have a straightforward interpretation because they are based on teachers who are present in the novice and early or mid-career stages and are thus based on teachers who are less likely to have left their school during their novice teaching years.

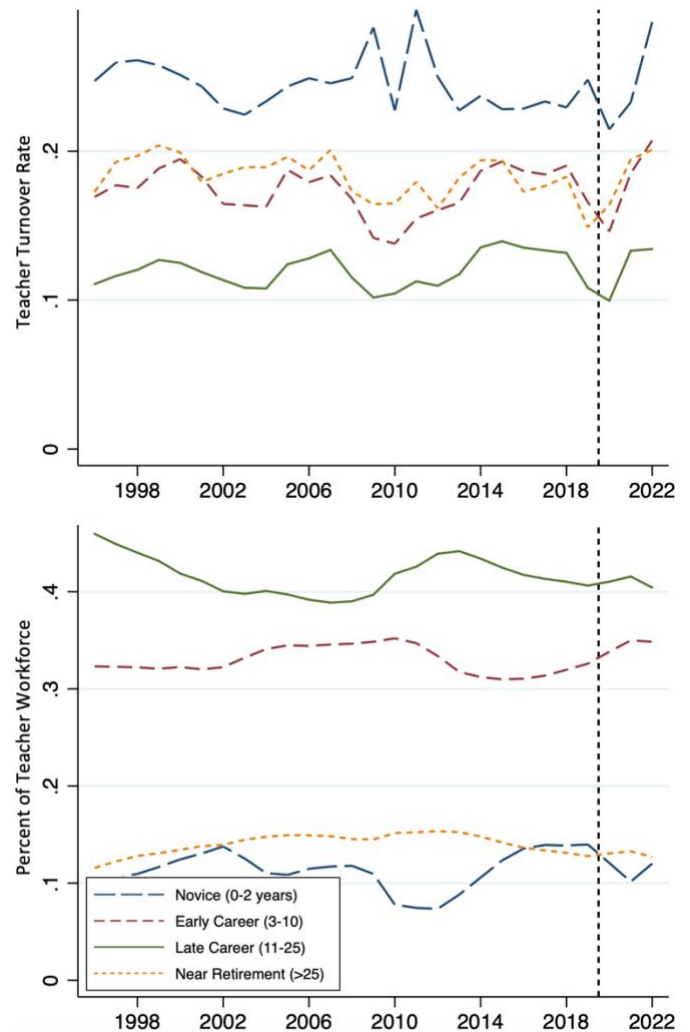
Similarly, the bottom set of coefficients for Model 3 show teachers are more likely to exit their school when working in suburb, town, or rural schools, compared to years in which those same teachers work in urban schools. This finding is necessarily based on teachers who work in at least two geographic locales, a smaller set of the overall sample.

Results from teacher fixed effects models for student demographics are more informative, as they examine teacher career path decisions for teachers who have experienced different student demographic profiles. Teachers are significantly more likely to leave their school when working in schools serving higher percentages of low-income students and student of color, compared to when those same teachers work in schools serving lower shares. As before, this finding may result from lack of structural supports for teachers in schools enrolling more historically underserved student populations.<sup>vi</sup>

In additional regression models not shown, we examine the same results, using only data from before the pandemic, the first year of the pandemic (2019-20, and the resulting teacher job transitions into 2020-21), when turnover plummeted and most school remained online, and the two years since the pandemic, when turnover increased substantially. While turnover was changing rapidly during this time period, the results from this exercise show the predictors of teacher turnover were relatively stable.

To further understand the important role of teacher career stage, and the cyclical nature of chronic teacher turnover, Figure 3 shows differences in turnover by teacher experience. Novice teachers and those nearing retirement are more likely to leave their school, while teachers are more stable during the middle portion of their careers. This pattern influences how students are impacted by turnover, since higher-poverty schools and those serving greater shares of students of Color employ a higher share of novice teachers, who generally have higher turnover rates.

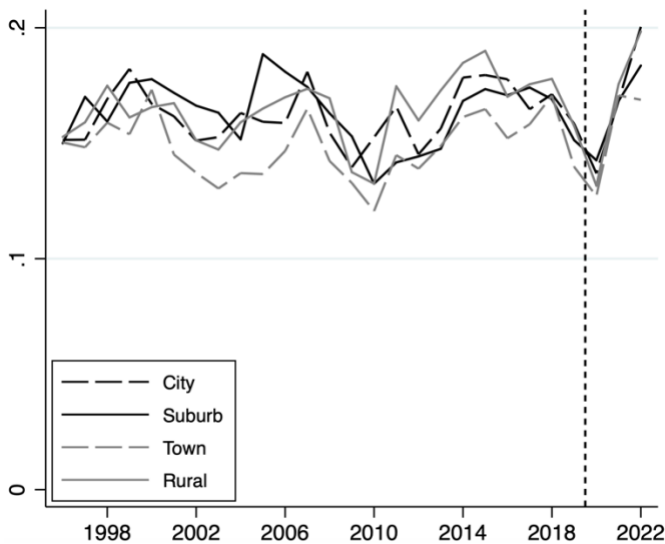
Finally, we examine teacher turnover rates by district urbanicity, Figure 4 shows that over the past two decades, schools in urban, suburban, town, and rural areas have not experienced substantially different rates of teacher turnover. Instead, as discussed earlier, the differences in turnover teacher career stage and student socioeconomic status.



**Figure 3.** Annual teacher attrition by experience level (top panel) and percent of workforce by experience level (bottom panel), 1995-96 to 2022-23

## POLICY RECOMMENDATIONS

We highlight two key findings from this analysis. First, teacher turnover initially decreased, but then increased substantially during the COVID-19 pandemic. At the end of the 2019-20 school year, schools had recently closed and were experimenting with remote delivery, in preparation for the 2020-21 school year. Teacher turnover declined that year, especially district switching, as most teachers hunkered down in their positions, and fewer were seeking new employment opportunities. In the subsequent two years, teacher attrition increased, especially among those leaving K-12 altogether. The most recent year of data, 2023-24, shows a decline in turnover--a slight return to pre-COVID rates, but the statewide rate of attrition still exceeds pre-pandemic levels. Moreover, the recent increase in turnover were driven primarily by increases in teachers



**Figure 4.** Annual teacher attrition in Washington State by urbanicity, 1995-96 to 2022-23

leaving the workforce entirely, rather than switching schools, districts, or roles (see Figure 2). How that exodus will impact schools, and whether those teachers will return in later years is an open question.

Second, schools that serve a greater share of student of color and low-income students have higher teacher turnover rates. Based on prior literature, we suspect one source of this gap may be differences in the amount of teacher supports as well as the level of resources available to support high-quality teacher working conditions. We offer several policy recommendations based on these findings:

**Develop retention strategies for schools with higher turnover rates, including efforts to create more inclusive and supportive work environments.** A body of research shows greater retention associated with higher salary and benefits as well as non-pecuniary job amenities, such as strong induction and mentoring programs, instructional autonomy, and professional development and career growth opportunities. While adequate salaries are needed to attract and retain excellent educators, studies show supportive working conditions are the most important work-related factors teacher weigh in making decisions about where to work.<sup>vii</sup> Survey data collected during the COVID-19 era highlight relational aspects of the job, including a sense of belonging and welcoming workspaces, as stronger predictors of retention than job characteristics.<sup>viii</sup>

School district, regional, and state education leaders can address the increased rates of educator turnover highlighted in this brief by implementing evidence-based

teacher retention strategies. State leaders must ensure schools have adequate resources to implement these practices, including compensating staff and evaluating change and improvement.

**Target state and district resources to districts and schools with higher teacher turnover.** State and district leaders need to be mindful of the targeted nature of educational disparities. Our data show that from 2014-15 to 2023-24, students of color in Washington were 1.3 times more likely than their white peers to attend a school with chronic teacher turnover—defined as schools with more than 25% turnover for three consecutive years. Across-the-board policy investment will be sufficient for addressing challenges that disproportionately impact a segment of schools.

**Leverage existing federal and state resources to identify needs, such as Washington’s Educator Equity Data Collection tool.** The federal Every Student Success Act requires states to define “excellent educators” and develop new data collection practices to monitor the equitable access to highly qualified stable teacher workforce.<sup>ix</sup> Washington’s Office of Superintendent for Public Instruction, the State Education Agency, has developed several tools, including the Educator Equity Data Collection to assist school districts and regional education leaders with identifying areas of needs.<sup>x</sup>

The stability of the teaching workforce is an essential element for fostering effective instructional environments in schools and for supporting student success. The turnover increase observed as schools entered the 2021-22 academic year, while not escalating to the widespread teacher departures some anticipated and highlighted in the media, nonetheless signals potential volatility within Washington’s teacher labor market. Developing strategies that nurture a supportive workplace is key in maintaining a stable teacher workforce during the COVID-19 era. As schools progress in their reopening from the disruptions caused by COVID-19, additional support will be needed to ensure that all students are able to achieve their full potential.

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