Characteristics of Washington High School Graduates Who Become Teachers

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About the ERDC

The research presented here uses data from the Education Research and Data Center, located in the Washington Office of Financial Management. ERDC works with partner agencies to conduct powerful analyses of learning that can help inform the decision-making of Washington legislators, parents, and education providers. ERDC's data system is a statewide longitudinal data system that includes de-identified data about people's preschool, educational and workforce experiences. In Fiscal Year 2019, ERDC was awarded a five-year Statewide Longitudinal Data System (SLDS) Grant, which involves using our data system to examine educational equity issues in Washington's public educational systems. ERDC is one of 28 grantees across the country who are participating in the FY19 SLDS Grant Program.

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Executive summary

This study focuses on Washington public K-12 educators in school years 2021 through 2023 and, for a group of younger educators, assesses their geographic place of employment relative to the high school from which they graduated (their home high school). School characteristics of their place of employment and their home high school are also presented, as well as selected demographic characteristics of the educators.

Key Findings:

1. Of younger teachers (born Sept. 1, 1991, or after) in school years 2021 through 2023, 68% to 70% were graduates of Washington public high schools.
2. Teachers who graduated from Washington public high schools have high employment rates in their "home" school districts, ranging from 26.3% in Educational Service District (ESD) 189 (northwest Washington) to 41.4% in ESD 123 (southeast Washington). Employment in their home ESD was over 60% in eight of the nine ESDs.
3. Over half of the Washington public high school graduates who were teachers in 2021 through 2023 graduated from schools with the lowest percentages of low-income students. Only 11% to 12% graduated from schools with the highest percentages of low-income students.
4. Compared with all teachers, younger teachers were more likely to work in schools with a high percentage of low-income students. Teachers who were Washington public high school graduates were slightly more likely to work in the schools with the highest percentages of low-income students compared with all younger teachers.

Background

This study addresses a question posed by the Center for Improvement of Student Learning (CISL),[1]

- Which K-12 teachers return to teach in their hometowns or regions where they were high school students?
- Which public K-12 students become teachers, and what were their K-12 educational/learning experiences?

The study focuses on classroom teachers in school years 2021, 2022, and 2023.[2]

Data and analytical approach

This descriptive analysis incorporates educator employment and certification data provided by the Office of Superintendent of Public Instruction (OSPI). Educators who are Washington public high school graduates are identified through matching with public high school enrollment data from OSPI. Unemployment Insurance wage data from the Employment Security Department determines the primary school district employer for educators employed by more than one school district.

Study Group

Educators

Educators in the public K-12 system in school years 2021 through 2023 were identified using the OSPI S-275 personnel data.[3] For each educator, the S-275 personnel data system collects records for each combination of duty and funding source as of Oct. 1 of each school year. The data include more than one record per educator per year if the employee works in more than one school or if funding for the employee comes from more than one source. The final study group data set includes a single record per educator per school year, reflecting the educator's primary school district of employment and their primary role as an educator — teacher, administrator, or educational staff associate.[4] Appendix A describes the process used to create the study dataset.

1. RCW 28A.300.130 established the Center for Improvement of Student Learning in the Office of Superintendent of Public Instruction.
2. School year is the 4-digit year in which the school year ends. School year '2023' is the equivalent of school year 2022-2023.
3. OSPI's S-275 reporting process provides a record of certificated and classified employees of the school districts and educational service districts. Data collected by the S-275 reporting process are collected at a detail appropriate for calculating state funding, responding for requests by the federal government, and being responsive to requests by the Legislature.
4. Administrator roles include Superintendent, Assistant Superintendent, Principal, Vice Principal, and Program Director. Educational Staff Associate (ESA) roles include School Behavior Analyst, School Counselor, School Nurse, School Occupational Therapist, School Orientation and Mobility Specialist, School Physical Therapist, School Psychologist, School Social Worker, and School Speech Language Pathologist/Audiologist.

Also, each record contains information regarding the certification status of each educator in each year. Educators who hold full certification are distinguished from those working under limited certificates.

Appendix B describes the certification categories in more detail.

Identification of Washington Public High School Graduates

Data required to identify Washington public high school graduates is available beginning with the high school graduating class of 2010, the first year that the Comprehensive Education Data and Reporting System (CEDARS) contains comprehensive data for high school graduates.

Identifying the subgroup of younger educators requires plotting the timing of an educator's potential trajectory from birth to the workforce. Although the compulsory enrollment age for children in Washington is eight, most enter kindergarten as 5-year-olds. State law requires that children be age five before Sept. 1 of the year of kindergarten entry.[5] At the other end of the education spectrum, the expected time between high school graduation and completion of a baccalaureate degree leading to educator certification is four years. Table 1 summarizes the related birthdate ranges and expected high school and college bachelor's degree completion.

Table 1: Birthdate range for high school graduates.

Birthdate Range	Expected	
	High School Graduation	Baccalaureate Completion
September 1, 1991 – August 31, 1992	2010	2014
September 1, 1992 – August 31, 1993	2011	2015
September 1, 1993 – August 31, 1994	2012	2016
September 1, 1994 – August 31, 1995	2013	2017
September 1, 1995 – August 31, 1996	2014	2018
September 1, 1996 – August 31, 1997	2015	2019
September 1, 1997– August 31, 1998	2016	2020
September 1, 1998 – August 31, 1999	2017	2021
September 1, 1999 – August 31, 2000	2018	2022

A subgroup of educators — Younger Educators — includes those born after Aug. 31, 1991. This group corresponds to students with expected high school graduation between 2010 and 2018 and potentially completing a baccalaureate degree in 2014 through 2022. The youngest of this group could be educators in 2023. Although the date ranges shown above are typical, there are exceptions. Each high school graduating class includes students younger and older than the expected birthdate range, but most fall within the ranges shown. Similarly, college completion may occur before the expected year, especially considering dual credit opportunities available to Washington high school students.

5. For the uniform age for entry to kindergarten, see WAC 392-335-010. WAC 392-335-020 describes exceptions to this rule, allowing a child to be enrolled in first grade after successful kindergarten completion. Also, WAC 392-335-025 allows for individual districts to use a screening process to admit younger children to kindergarten. Some children enroll in public K-12 education as late as age eight, the age of mandatory school attendance in Washington. See RCW 28A.225.010.

The study group of Younger Educators was divided into two subgroups — those who are Washington public high school graduates and those who are not (Other Younger Educators). However, many of the Other Younger Educators may have attended public K-12 schools in Washington before graduating elsewhere.

Note: *In the following tables, "All Educators" includes educators of all ages. "Younger Educators" are those born on or after Sept. 1, 1991, or who graduated from a Washington public high school in 2010 or later. "WA HS Graduate Educators" are educators who graduated from a Washington public high school in the class of 2010 or later.*

Table 2 shows the distribution of educators by school year and by role for 1) All Educators (all ages), 2) Younger Educators, and 3) educators who are Washington public high school graduates. Educators include teachers, administrators, and educational staff associates.

Table 2: Distribution of educators by role.

All Educators	**Counts**			**Shares**		
	2021	**2022**	**2023**	**2021**	**2022**	**2023**
Teacher	65,239	66,630	66,236	84%	84%	83%
Administrator	5,090	5,301	5,376	7%	7%	7%
Educational Staff Associate	7,313	7,540	7,908	9%	9%	10%
Total	77,642	79,471	79,520	100%	100%	100%
Younger Educators	**2021**	**2022**	**2023**	**2021**	**2022**	**2023**
Teacher	6,842	8,913	10,266	93%	92%	91%
Administrator	11	31	59	0%	0%	1%
Educational Staff Associate	530	738	1,012	7%	8%	9%
Total	7,383	9,682	11,337	100%	100%	100%
Share of all educators	*10%*	*13%*	*15%*			
WA HS Graduate Educators	**2021**	**2022**	**2023**	**2021**	**2022**	**2023**
Teacher	4,729	6,274	7,325	94%	94%	93%
Administrator	7	21	36	0%	0%	0%
Educational Staff Associate	280	407	552	6%	6%	7%
Total	5,016	6,702	7,913	100%	100%	100%
Share of all educators	*7%*	*9%*	*11%*			
Share of younger educators	*69%*	*70%*	*71%*			

Numbers in this table are rounded to the nearest 10 to minimize the certainty of individual identification.[6] Numbers may not add to total due to this rounding.

6. See U.S. Department of Education, "Data De-identification: An Overview of Basic Terms," at https://studentprivacy.ed.gov/resources/data-de-identification-overview-basic-terms

The numbers in these tables illustrate some typical transitions in educators' careers. Note that administrators account for a higher share of All Educators than Younger Educators. Table 2 shows that:

- About 83% to 84% of All Educators are classroom teachers. Administrator and other roles account for the remaining balance. For Younger Educators, teacher shares declined from 93% to 91% over the three years as shares in administrator and ESA roles increased.
- Teachers accounted for 94% of the high school graduate educators in 2021 and decreased to 93% by 2023.
- As expected, Younger Educators account for increasing shares of All Educators over the three years covered here – from 10% in 2021 to 15% in 2023.
- HS Graduate Educators represent 7% of all educators in 2021 and 11 percent in 2023.
- HS Graduate Educators increased from 69% of Younger Educators in 2021 to 70 percent in 2023.

Table 3 shows the distribution of educators by role for educators not employed in public K-12 education in any capacity in the prior year.

Table 3: Distribution of newly employed educators (those not employed in public K-12 in prior year).

All Educators	**Counts**			**Shares**		
	2021	**2022**	**2023**	**2021**	**2022**	**2023**
Teacher	3,870	6,740	6,130	82%	86%	83%
Administrator	150	180	200	3%	2%	3%
Educational Staff Associate	690	920	1,100	15%	12%	15%
Total	4,710	7,840	7,430	100%	100%	100%
Younger Educators	**2021**	**2022**	**2023**	**2021**	**2022**	**2023**
Teacher	1,340	2,740	2,490	89%	91%	87%
Administrator	<10	<10	<10	0%	0%	0%
Educational Staff Associate	170	280	380	11%	9%	13%
Total	1,510	3,020	2,880	100%	100%	100%
Share of all educators	*32%*	*39%*	*39%*			
WA HS Graduate Educators	**2021**	**2022**	**2023**	**2021**	**2022**	**2023**
Teacher	920	1,930	1730	91%	93%	90%
Administrator	<10	<10	<10	0%	0%	0%
Educational Staff Associate	100	150	200	9%	7%	10%
Total	1,010	2,080	1,930	100%	100%	100%
Share of All Educators	*21%*	*27%*	*26%*			
Share of Younger Educators	*67%*	*69%*	*67%*			

Numbers in this table are rounded to the nearest 10 to minimize the certainty of individual identification. Numbers may not add to total due to this rounding.

Not surprisingly, younger educators and Washington high school graduate educators make up a larger proportion of newly employed teachers than they do of all teachers. Other patterns similar to those illustrated in Table 2 emerge:

- Younger Educators accounted for 32% of newly employed educators in 2021. Washington HS Graduate Educators accounted for 67% of those individuals.
- In 2023, Younger Educators accounted for 39% of newly employed educators. Washington HS Graduates accounted for 67% of those individuals.

Note: The discussions that follow focus on Teachers. "All Teachers" includes educators of all ages whose primary role is Teacher. "Younger Teachers" are those born on or after Sept. 1, 1991, or who graduated from a Washington public high school in 2010 or later. "WA HS Graduate Teachers" are teachers who graduated from a Washington public high school in the class of 2010 or later. "Other Younger" teachers are younger teachers who are not graduates of a public high school in Washington.

Geographic characteristics of employment

There are 295 school districts in Washington. In addition, state-tribal education compact schools, charter schools, and several additional jurisdictions provide public K-12 education. Each of the approximately 800 schools associated with these organizations is a potential employment location for a teacher who graduated from Washington public high schools.[7] Approximately 265 districts, including charter districts, supply public high school graduates who enter teaching.[8]

East and West of the Cascades

The Cascade Range is a significant physical barrier to transportation between the eastern and western parts of the state. In 2020, Washington west of the Cascades contained 76% of the state's school-age population.[9] Most high school graduates who became educators (66%in 2023) originated in western Washington high schools and were employed in western Washington high schools. Table 4 shows the employment locations — east or west of the Cascades — of educators who were Washington public high school graduates.

7. See OSPI, About School Districts (https://ospi.k12.wa.us/about-ospi/about-school-districts) for a discussion of school districts and equivalent entities offering K-12 education.
8. These counts were obtained from the U.S. Department of Education Common Core of Data.
9. Population aged 5 to 17 is the main driver of public K-12 enrollment. The figures cited are available at https://ofm.wa.gov/washington-data-research/population-demographics .

Table 4: Employment of teachers who graduated from a Washington public high school.

Relative to the Cascade Range	Counts			Shares		
	2021	2022	2023	2021	2022	2023
East High School/East Employment	1,067	1,553	1,846	23%	25%	25%
West High School/West Employment	3,242	4,177	4,840	69%	67%	66%
East High School/West Employment	208	255	309	4%	4%	4%
West High School /East Employment	212	289	330	4%	5%	5%
Total	4,729	6,274	7,325	100%	100%	100%
Graduates from eastern Washington	1,275	1,808	2,155	27%	29%	29%
Graduates from western Washington	3,454	4,466	5,170	73%	71%	71%

The following patterns are evident:

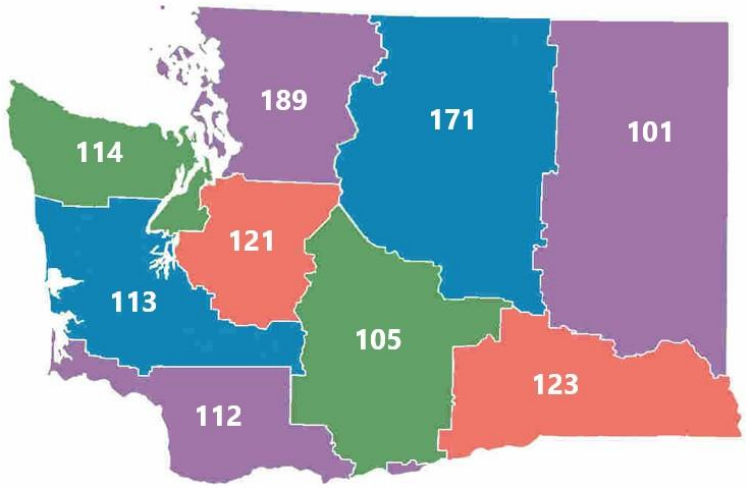
- About 8% to 9% of teachers were working "cross-state" relative to the location of the high school from which they graduated.
- Over 90% of teachers who graduated from a high school west of the Cascades were employed in a western Washington school at some point from 2021 through 2023. Eastern Washington high school graduates were employed east of the Cascades at a lower rate – ranging from 83% to 86% in the study years.[10]

Educational Service Districts

Nine regional Educational Service Districts (ESD) serve school districts in Washington.[11] ESDs provide a convenient structure to explore the geographic mobility of high school students who become public school teachers. Figure 1 shows a map of the nine ESDs.[12] With a single exception, each ESD comprises a contiguous set of school districts.[13]

10. For example, in 2021, 3,454 new educators were graduates of a high school west of the Cascades. Of these, 3,242 (94%) were employed in a western Washington school. Similarly, in 2021, 1,275 new educators were graduates of a high school in eastern Washington. Of those, 1,067 (84%) were employed in a school in eastern Washington.
11. See https://app.leg.wa.gov/RCW/default.aspx?cite=28A.310.
12. "Geographic Mobility" refers to the movement of people from one location to another. See https://www.census.gov/topics/population/migration.html.
13. Roosevelt School District in Klickitat county serves students in grades K-6. The closest district serving middle and high school grades is Bickleton, which is in ESD 112. District literature points out that attending high school in Goldendale (ESD 105) involves 7.8 hours per week on a bus, while attending in Bickleton (ESD 112) involves 4.4 hours. See "Roosevelt School District 7-12th Grade Options," available on the Roosevelt School District website.

Figure 1: Educational Service Districts



West of Cascades:
- Educational Service District 112
- Capital Region ESD 113
- Olympic ESD 114
- Puget Sound ESD 121
- Northwest ESD 189

East of Cascades:
- Northeast Washington ESD 101
- Educational Service District 105
- Educational Service District 123
- North Central ESD171

Table 5 shows teachers' employment district and ESD relative to the district and ESD of the high school from which they graduated for 2023. For example, 29.6% of teachers who graduated from a high school in ESD 101 were teaching in the same district as their high school in 2023. An additional 45.8% of those graduates were teaching in an ESD 101 district other than the one from which they graduated. So, 75.4% of the ESD 101 high school graduates who were classroom teachers in 2023 were teaching in an ESD 101 school.

Table 5: Employment of teachers who are Washington high school graduates, 2023.

High School ESD	Same District	Different District									
		ESD 101	ESD 105	ESD 112	ESD 113	ESD 114	ESD 121	ESD 123	ESD 171	ESD 189	Same ESD Total
101	29.6%	45.8%	1.5%	2.0%	1.4%	0.6%	9.9%	2.9%	2.6%	3.8%	75.4%
105	37.2%	3.4%	39.3%	1.0%	0.8%	0.2%	7.4%	5.7%	2.7%	2.5%	76.3%
112	28.4%	2.8%	2.1%	45.4%	2.7%	1.8%	11.1%	1.2%	1.2%	3.2%	73.9%
113	29.0%	2.5%	1.7%	1.8%	37.1%	2.2%	18.7%	0.2%	1.5%	5.3%	66.2%
114	29.0%	2.2%	2.2%	2.2%	4.7%	16.1%	32.6%	1.8%	1.1%	8.2%	45.2%
121	30.6%	2.2%	1.5%	0.8%	1.7%	1.5%	52.9%	0.7%	1.0%	7.2%	83.4%
123	41.3%	9.3%	6.8%	0.8%	0.8%	0.0%	5.2%	31.8%	1.9%	2.1%	73.1%
171	39.0%	7.3%	4.5%	1.4%	1.9%	0.5%	10.9%	5.9%	25.1%	3.5%	64.1%
189	26.3%	3.0%	1.5%	0.7%	1.0%	0.5%	22.3%	1.2%	2.1%	41.4%	67.7%

Table 5 shows that:

- Washington high school graduate teachers have high employment rates in their "home" school districts, ranging from 26.3%in ESD 189 (northwest Washington) to 41.3%in ESD 123 (southeast Washington).
- Most Washington high school graduate teachers work in the same ESD where they attended high school, though this ranges from 45.2% of Washington high school graduate teachers in Olympic ESD 114 who teach in that ESD up to 83.4% of Washington high school graduate teachers in Puget Sound ESD 121 who teach in that ESD.
- In all but one instance, if a teacher was not employed in their home district, the next most likely place of employment was Puget Sound ESD 121, which serves the heavily populated Seattle-Tacoma region. ESD 189 ranked second for teachers whose home ESD was ESD 121.
- The exception was ESD 123 in the southeast, where the Northeast ESD 101, including the Spokane area, accounted for the second-highest employment rate.

Table 5 shows results for the school year 2023. The following tables show results for all three school years and use a "fuzzy" ESD employment rate that includes employment in the same ESD or in adjacent school districts outside that ESD.[14]

Washington high school graduate teachers who enter teaching tend to stay close to home. In 2023, 31% worked in the district from which they graduated high school and an additional 44%worked in the same Educational Service District (ESD) as their high school or in an adjacent school district outside that ESD. Table 6 shows the employment pattern relative to home high school for classroom teachers who graduated from Washington public high schools.

Table 6: Employment of Washington public high school graduates.

	Counts			Shares		
WA HS Graduate Teachers	**2021**	**2022**	**2023**	**2021**	**2022**	**2023**
Same district	1,359	1,882	2,285	29%	30%	31%
Same ESD or adjacent district	2,136	2,823	3,248	45%	45%	44%
More distant	1,231	1,565	1,786	26%	25%	24%
Total	4,726	6,270	7,319	100%	100%	100%

Table 7 shows the geographic mobility of high school graduates into public K12 teaching positions for 2021 through 2023 by district and by "fuzzy" ESD (same ESD or adjacent district).

14. Adjacency here is meaningful adjacency, where it is possible to travel between adjacent districts on a daily basis by road or by ferry, without crossing significant mountain passes.

Table 7: Teacher employment relative to home high school by ESD.

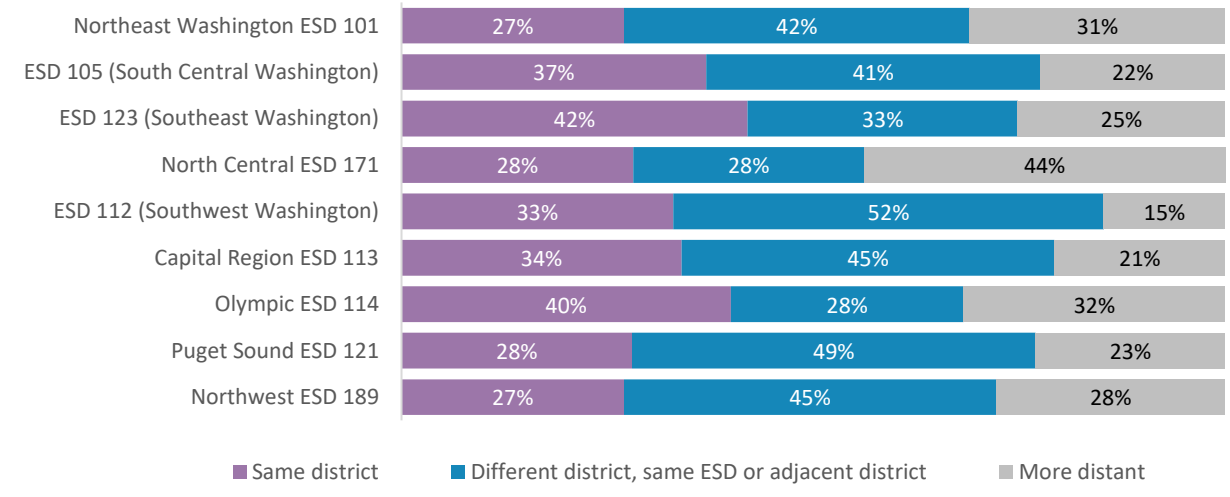
WA HS Graduate Teachers Home High School	Employment					
	Same District			Same ESD or Adjacent District		
	2021	2022	2023	2021	2022	2023
Northeast Washington ESD 101	24%	27%	27%	44%	42%	42%
ESD 105 (South Central Washington)	31%	34%	37%	43%	40%	41%
ESD 123 (Southeast Washington)	36%	41%	42%	34%	33%	33%
North Central ESD 171	33%	41%	43%	35%	32%	28%
ESD 112 (Southwest Washington)	33%	31%	33%	50%	53%	52%
Capital Region ESD 113	37%	36%	34%	45%	45%	45%
Olympic ESD 114	30%	35%	40%	25%	28%	28%
Puget Sound ESD 121	27%	27%	28%	49%	50%	49%
Northwest ESD 189	26%	26%	27%	46%	47%	45%

Table 7 demonstrates that:

- The four eastern Washington ESDs (101, 105, 123, and 171) show increasing shares of teachers working in the same district as their home high school. In western Washington, this pattern appears in ESD 114, but the remaining four ESDs show little change over the three years.
- In contrast, there is a decrease in the share of teachers employed in the same ESD or adjacent districts in eastern Washington. ESD 114 is the only ESD showing increases in Same ESD or adjacent district employment over the three years examined.

Figure 2 displays this information for 2023.

Figure 2: Teacher employment relative to home high school, 2023.



Characteristics of Public High School Graduates Who Become Teachers

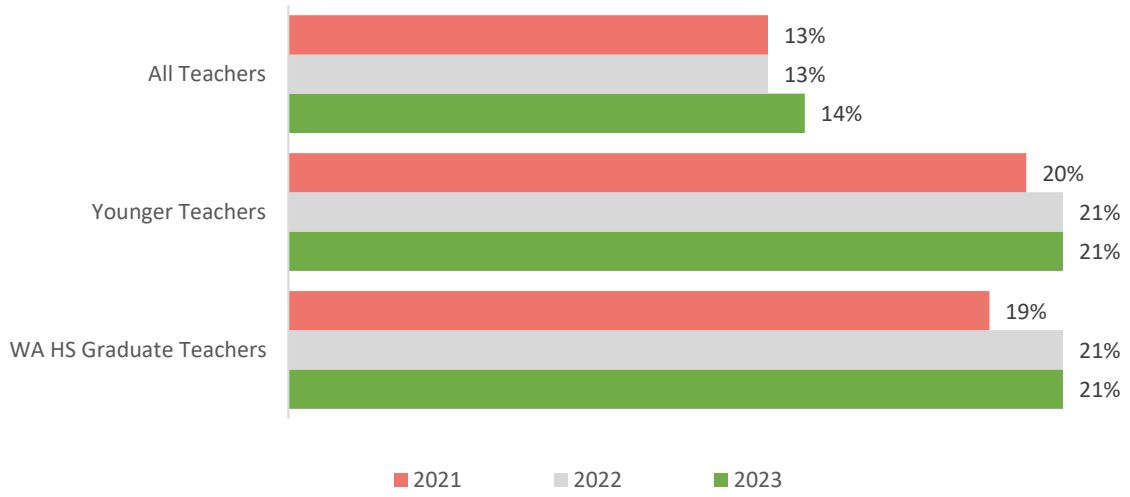
In addition to birthdate, which allows for the identification of Younger Educators, the educator certification data includes gender, race and ethnicity information. Ethnicity (Hispanic or non-Hispanic) is collected separately from race. Educators are allowed to select more than one race category. The following tables distinguish between two broad racial and ethnic groups – (1) White alone, non-Hispanic and (2) Black, Indigenous, and Other People of Color (BIPOC). The following tables show counts and percentages for these two groups and also counts and percentages for the teachers of color alone or in combination with other races. The categories that comprise the BIPOC group will add to more than the total since people can select more than one race category, and the Hispanic category is recorded separately. In general, younger teachers and Washington high school graduate teachers are more likely to be teachers of color than all teachers (Figure 3).

Table 8: Teacher race and ethnicity.

	Counts			Shares		
All Teachers	**2021**	**2022**	**2023**	**2021**	**2022**	**2023**
BIPOC	8,172	8,730	9,067	13%	13%	14%
Hispanic (any race)	3,370	3,718	3,932	5%	6%	6%
AI/AN alone or in combination	1,156	1,206	1,225	2%	2%	2%
Asian alone or in combination	2,611	2,754	2,794	4%	4%	4%
Black alone or in combination	1,304	1,333	1,401	2%	2%	2%
NH/PI alone or in combination	492	530	555	1%	1%	1%
White alone, not Hispanic	56,862	57,655	56,669	87%	87%	86%
Total	65,034	66,385	65,736			
Younger Teachers	**2021**	**2022**	**2023**	**2021**	**2022**	**2023**
BIPOC	1,328	1,808	2,129	20%	21%	21%
Hispanic (any race)	620	895	1,073	9%	10%	11%
AI/AN alone or in combination	131	185	221	2%	2%	2%
Asian alone or in combination	438	572	628	6%	7%	6%
Black alone or in combination	182	220	283	3%	3%	3%
NH/PI alone or in combination	88	114	132	1%	1%	1%
White alone, not Hispanic	5,424	6,990	7,906	80%	79%	79%
Total	6,752	8,798	10,035			
WA HS Graduate Teachers	**2021**	**2022**	**2023**	**2021**	**2022**	**2023**
BIPOC	904	1,280	1,538	19%	21%	21%
Hispanic (any race)	446	675	826	10%	11%	11%
AI/AN alone or in combination	92	131	158	2%	2%	2%
Asian alone or in combination	280	377	415	6%	6%	6%
Black alone or in combination	117	145	194	3%	2%	3%
NH/PI alone or in combination	58	79	92	1%	1%	1%
White alone, not Hispanic	3,763	4,914	5,671	81%	79%	79%
Total	4,667	6,194	7,209			

BIPOC = Black, Indigenous and Other People of Color
AI/AN = American Indian and Alaska Native; Black = Black or African-American;
NH/PI = Native Hawaiian and Pacific Islander
Universe: Teachers for whom race and ethnicity are reported.

Figure 3: Teacher race and ethnicity — percent BIPOC.



Characteristics of teachers' home high schools shed light on the high school experiences of the Washington public high school graduates who were classroom teachers in 2021, 2022 and 2023. To assess the income status of schools sending graduates into the workforce, high schools in the state were ranked by the percentage of students eligible for free or reduced-price meals. The schools were assigned to quartiles based on this ranking. The schools with enrollments totaling one-fourth of the total state enrollment were assigned to Quartile 1, which corresponds to the group with the highest percentage of low-income students. Ranges of the percentage of students eligible for free and reduced-price meals for each quartile are shown in Table 9.

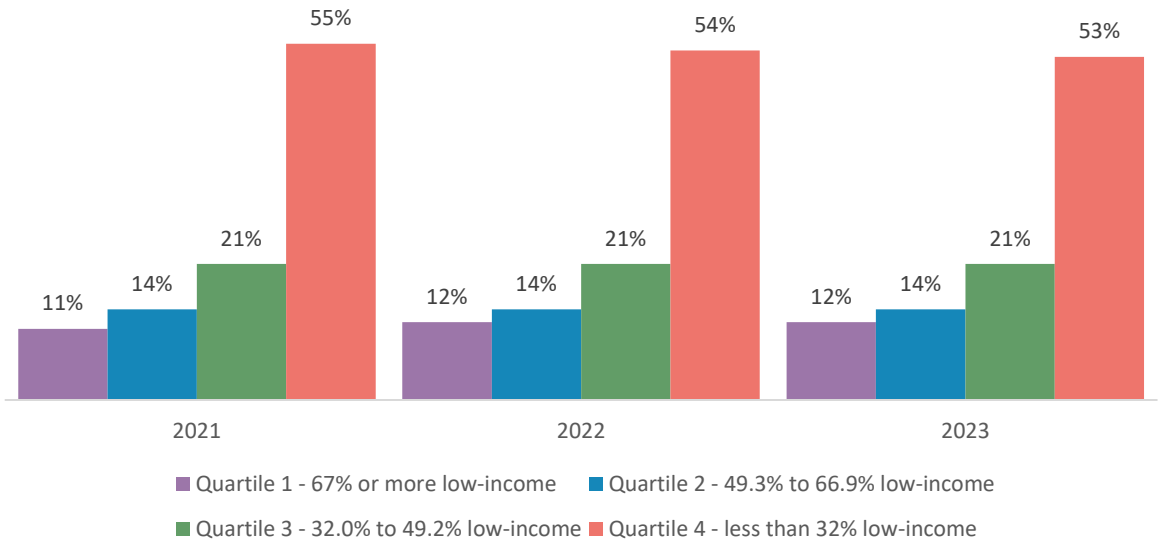
Table 9: Characteristics of home high school — percent low-income students.

Quartile	Counts			Shares		
	2021	2022	2023	2021	2022	2023
1 – 67% or more low-income students	502	722	861	11%	12%	12%
2 – 49.3 to 66.9% low-income students	642	870	1,034	14%	14%	14%
3 – 32.0 to 49.2% low-income students	975	1,292	1,517	21%	21%	21%
4 – less than 32% low-income students	2,575	3,339	3,859	55%	54%	53%
Total	4,694	6,223	7,271			

Universe: Washington high school graduate teachers who graduated from high schools where enrollment of low-income students is available.

Over half of Washington public high school graduate teachers in 2021 through 2023 graduated from schools with the lowest percentages of low-income students. Only 11% to 12% graduated from schools with the highest percentages of low-income students. Figure 4 displays this information.

Figure 4: Characteristics of home high school — percent low-income students.



Teachers' home high schools can also be classified by the percentage of BIPOC students in the student body. Table 10 displays the counts and percentages associated with quartiles based on this value.

Table 10: Characteristics of home high school — percent BIPOC students.

Quartile	Counts			Shares		
	2021	2022	2023	2021	2022	2023
1 – 66% or more BIPOC students	949	1,300	1,537	20%	21%	21%
2 – 49.4 to 65.9% BIPOC students	1,290	1,682	1,947	27%	27%	27%
3 – 33.5 to 49.3% BIPOC students	1,214	1,577	1,833	26%	25%	25%
4 – less than 33.5% BIPOC students	1,241	1,664	1,954	26%	27%	27%
Total	4,694	6,223	7,271			

Universe: Washington high school teachers who graduated from high schools where race and ethnicity is reported

Fewer teachers are associated with home high schools in Quartile 1, schools with the highest percentages of BIPOC students, than in the other quartiles. The remaining teachers are relatively evenly distributed over the remaining three quartile groupings. Figure 5 displays this information.

Figure 5: Characteristics of educators' home high schools — percent BIPOC students.

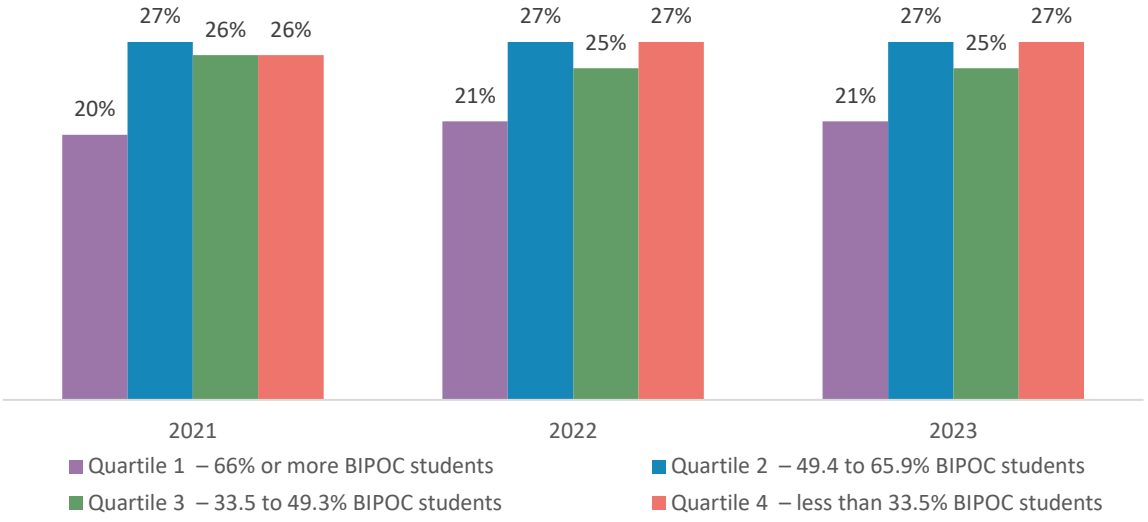


Table 11 shows the geographic locale for the home high schools of teachers in 2021 through 2023. The 12 locale categories are condensed into two broad groups — City/Suburban and Town/Rural. Appendix C contains a discussion of the development of this information and the assignment of detailed categories to these two groupings. Slightly under three-quarters of teachers who graduated from Washington high schools came from schools in urban or suburban settings.

Table 11: Characteristics of home high school — geographic locale.

Younger Teachers	Counts				Shares		
	2021	2022	2023		2021	2022	2023
City/Suburban	3,497	4,599	5,340		74%	74%	73%
Town/Rural	1,197	1,624	1,930		26%	26%	27%
Total	4,694	6,223	7,270		100%	100%	100%
Universe: High school graduates (educators) who graduated from high schools with locale data.							

Initial Certification Type

Full certification includes residency, professional, initial, and continuing certificates and First people's language/culture. Limited certificates include conditional, emergency substitute, intern substitute, and transitional. Emergency teachers are a recently added category. Appendix B contains detailed descriptions of educator certifications associated with these categories.

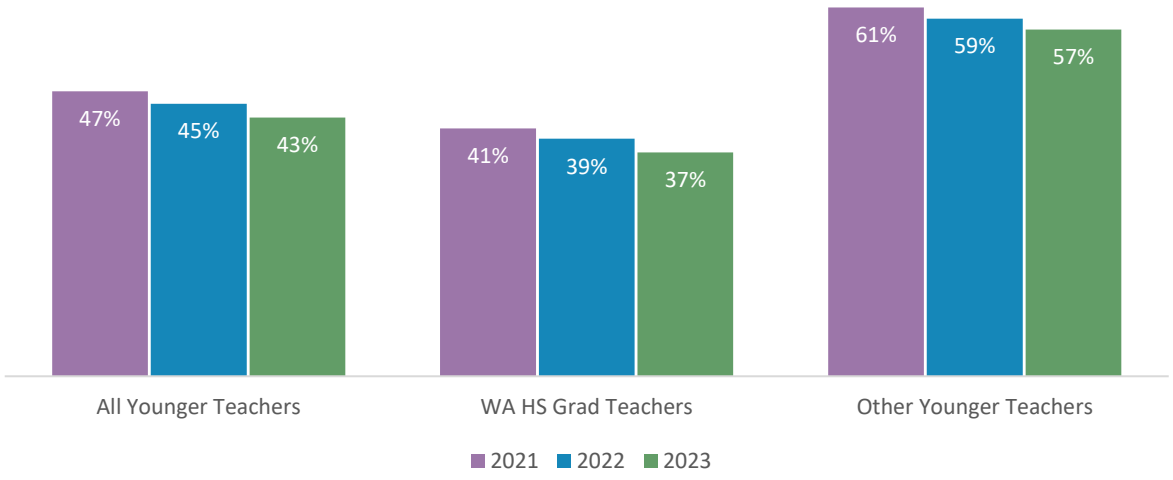
Teachers often begin their careers as educators with a limited or emergency certificate and move on to full certification. Table 12 shows the earliest certification type earned by teachers who were fully certified in 2021 through 2023.

Table 12: Earliest certification type – fully certified teachers.

	Counts			Shares		
Younger Teachers	**2021**	**2022**	**2023**	**2021**	**2022**	**2023**
Full	2,928	3,724	4,040	47%	45%	43%
Substitute	173	224	244	3%	3%	3%
Limited	2,994	4,097	4,935	48%	50%	52%
Emergency	129	226	240	2%	3%	3%
Total	6,224	8,271	9,459	100%	100%	100%
WA HS Graduate Teachers	**2021**	**2022**	**2023**	**2021**	**2022**	**2023**
Full	1,768	2,296	2,510	41%	39%	37%
Substitute	49	67	71	1%	1%	1%
Limited	2,409	3,318	4,018	56%	57%	59%
Emergency	93	173	189	2%	3%	3%
Total	4,319	5,854	6,788	100%	100%	100%
Other Younger Teachers	**2021**	**2022**	**2023**	**2021**	**2022**	**2023**
Full	1,160	1,428	1,530	61%	59%	57%
Substitute	124	157	173	7%	6%	6%
Limited	585	779	917	31%	32%	34%
Emergency	36	53	51	2%	2%	2%
Total	1,905	2,417	2,671	100%	100%	100%

Overall, 47% of the fully-certified Younger Teachers started their career fully certified. Washington high school graduate teachers were less likely to hold full certification initially. The share of Washington high school graduate teachers with full certification ranged from 37% to 41%, compared with 57% to 61% percent for the Other Younger Teachers. Figure 6 displays this information.

Figure 6: Fully certified teachers who were fully certified when originally employed.



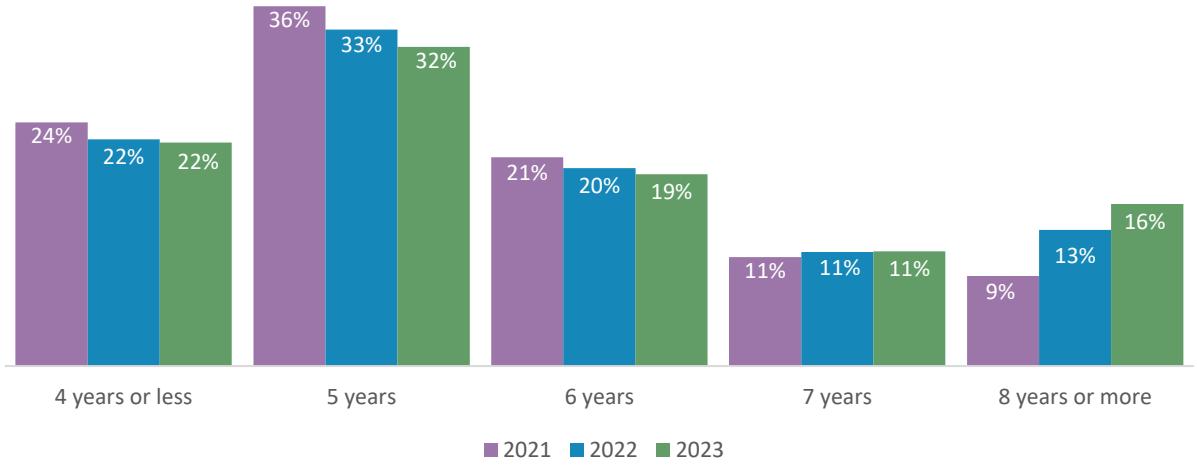
Years to Certification

Table 13 shows counts and shares of fully certified teachers in 2021 through 2023 by the interval between high school graduation and first certification of any type (full, substitute, limited or emergency). Most teachers attained full certification within six years of high school graduation, indicating that they enrolled in postsecondary education shortly after graduating from high school. About 20%of Washington high school graduate teachers achieved full certification after seven or more years. Figure 7 displays this information.

Table 13: Year of earliest certification relative to high school graduation year.

WA HS Graduate Teachers	Counts			Shares		
	2021	2022	2023	2021	2022	2023
Four years or less	1,041	1,313	1,501	24%	22%	22%
Five years	1,537	1,947	2,141	36%	33%	32%
Six years	891	1,146	1,288	21%	20%	19%
Seven years	465	660	7780	11%	11%	11%
Eight years	237	383	461	5%	7%	7%
Nine years	101	201	279	2%	3%	4%
Ten or more years	47	204	348	1%	3%	5%
Total	4,319	5,854	6,797	100%	100%	100%

Figure 7: Interval between high school graduation year and year of earliest certification.



School characteristics and teacher employment

How does the distribution of Washington public high school graduate teachers compare with distribution of all teachers across schools with different student populations? All public schools were divided into quartiles based on the percentage of low-income students, the percentage of students who are English Learners, and the percentage of students who are BIPOC (Hispanic or a race category other than White alone).[15] Quartile groupings were based on the number of students in each category using data from the most recent OSPI enrollment report card dataset.[16] Table 14 shows the values associated with quartile categories for these characteristics.

Table 14: Quartile values for selected school characteristics

Element	Quartile			
	1 (Highest)	2	3	4 (Lowest)
Low-income students	67.0% or greater	49.3 – 66.9%	32.0 – 49.2%	Less than 32.0%
English Learners	19.4% or greater	9.0 – 19.3%	4.4 – 8.9%	Less than 4.4%
BIPOC students	66.0% or greater	49.4 – 65.9%	33.5 – 49.3%	Less than 33.5%

If teachers were equally distributed across schools, one would expect to see approximately 25% of teachers employed in each quartile. Tables 15 through 17 show the employment counts and shares for the highest percentile category for percent low-income students, percent English Learners, and percent

15. All schools (not just high schools) were used in these quartile calculations.
16. OSPI, Report Card Enrollment 2021-22 School Year

BIPOC students. In each case, Younger Teachers are more likely to be employed in schools with the highest percentage of students than teachers overall.

Table 15: Employment in schools with the highest percentage of low-income students.

	Counts			Shares		
	2021	**2022**	**2023**	**2021**	**2022**	**2023**
All Teachers	16,853	17,305	17,177	27%	27%	27%
Younger Teachers	2,139	2,841	3,257	32%	33%	32%
Washington HS Graduate Teachers	1,513	2,049	2,383	33%	34%	33%
Other Younger Teachers	626	792	874	30%	31%	31%

Universe: Teachers employed in schools with available low-income student enrollment data.

For example, 27% of All Teachers are employed in schools with the highest percentage of low-income students, while 32 to 33% of Younger Teachers are employed in schools in this category. Teachers who graduated from Washington public high schools showed slightly higher rates of employment in the schools in the top quartile of low-income students.

Table 16: Employment in schools with the highest percentage of BIPOC students.

	Counts			Shares		
	2021	**2022**	**2023**	**2021**	**2022**	**2023**
All Teachers	16,649	16,691	16,588	26%	26%	26%
Younger Teachers	2,377	2,926	3,344	35%	34%	33%
Washington HS Graduate Teachers	1,578	1,998	2,313	34%	33%	32%
Other Younger Teachers	799	928	1,031	38%	36%	36%

Universe: Teachers employed in schools with available race and ethnic data.

Younger Teachers are more likely to work in schools with high percentages of BIPOC students. Among the Younger Teachers, those who are not Washington high school graduates were more likely to work in schools with high BIPOC student enrollment than Washington high school graduate teachers — 36 to 38% compared to 33 to 35%, respectively.

Table 17: Employment in schools with the highest percentage of English Learners.

	Counts			Shares		
	2021	**2022**	**2023**	**2021**	**2022**	**2023**
All Teachers	17,121	17,167	17,083	27%	27%	27%
Younger Teachers	2,365	2,910	3,343	35%	34%	33%
Washington HS Graduate Teachers	1,616	2,047	2,399	35%	34%	33%
Other Younger Teachers	749	863	944	36%	34%	33%

Universe: Teachers employed in schools with available English Learner student enrollment data.

Younger Teachers are more likely to work in schools with high percentages of students who are English Learners than All Teachers — 33% to 35% compared to 27%, respectively.

As noted above, slightly under 75%of Washington high school graduate teachers graduated from high schools in areas classified as urban/suburban. Looking at the high schools where Younger Teachers are

employed, a slightly different pattern emerges. Table 19 shows the locale of schools where three groups of teachers are employed — Younger Teachers, HS Graduate Teachers, and Other Younger Teachers.

Table 18: Employment by geographic locale of school where employed.

	Counts			Shares		
Younger Teachers	**2021**	**2022**	**2023**	**2021**	**2022**	**2023**
City/Suburban	5,321	6,699	7,721	79%	77%	77%
Town/Rural	1,373	1,960	2,296	21%	23%	23%
Total	6,694	8,659	10,017	100%	100%	100%
WA HS Graduate Teachers	**2021**	**2022**	**2023**	**2021**	**2022**	**2023**
City/Suburban	3,576	4,594	5,367	77%	75%	75%
Town/Rural	1,046	1,510	1,789	23%	25%	25%
Total	4,622	6,104	7,156	100%	100%	100%
Other Younger Teachers	**2021**	**2022**	**2023**	**2021**	**2022**	**2023**
City/Suburban	1,745	2,105	2,354	84%	82%	82%
Town/Rural	327	450	507	16%	18%	18%
Total	2,072	2,555	2,861	100%	100%	100%

Among the Younger Teachers, Washington public high school graduate teachers are more likely to be employed in Town/Rural locations (24% to 25%) than Other Younger Teachers (16% to 18%).

Next Steps

This study is the first step in evaluating the experiences of Washington public high school graduates who become teachers. This work can be enhanced by adding information about the programs these students participated in and services received during their K-12 years and incorporating details of their postsecondary educator preparation programs.

Appendix A: Educator primary employer and role.

Construction of the study file began with two sources of educator information from OSPI.

1. Public K-12 **personnel** data provided to ERDC are extracts from submissions from school districts and Educational Service Districts to OSPI. The S-275 focuses on employment assignments (compensation, contracts, duties, programs and activities). It includes some demographic, education, and experience information about each educator. ERDC receives annual S-275 files each spring.
2. Educator **certification** data includes information about OSPI-issued educator certificates, including endorsements in various specialties. All individuals with certificates dated 1970 or after are included in these files, whether employed in public K-12 education or not. OSPI provides an updated certification file containing all certifications dating to 1970 to ERDC each spring.

Designating Primary Employer (School District or ESD)

It is not unusual for an educator to be employed by more than one district or ESD. To determine the primary employer, wage data provided by the Employment Security Department was used to identify the primary employer — the school district or ESD associated with the highest earnings during the school year. The study dataset contains a single school —– educator combination for each year.

Designating Primary Role

Details in the S-275 define six categories of role or duty.

1. Teacher – duty roots 31-34, 41, 52, 63
2. Administrator – duty root 1x or 2x
3. Educational Staff Associate (ESA) – duty roots 39, 42-47, 48, 49, 64
4. Instructional Paraprofessional – duty root 91 and activity code 27 or 22
5. Other – duty roots 40, 51, 61
6. Classified – duty root 9x other than paraprofessionals

For each educator's S-275 record, assignment percentages were consolidated into these six categories. All records were then rolled up by educator-district/ESD-school year. The educator was classified as a teacher if assignment percentages for teacher duty roots amounted to 50% or more of the total. For educators not classified as teachers, any category associated with 50% or more was assigned. For educators where no single category accounted for 50% of the total assignment, the category with the highest assignment percentage was associated with the educator, with the following priority order: teacher, administrator, ESA, instructional paraprofessional, other, classified.

Table A-1: Four examples of educator category designation.

Primary role	Rationale	Assignment percentages			
		Teacher	Administrator	ESA	Paraprofessional
Teacher	Teacher>=50%	50%	50%		
Teacher	Teacher highest percentage	40%	30%		30%
Administrator	Administrator ranked above ESA		50%	50%	
Teacher	Teacher tied for highest percentage	40%	40%	20%	

Appendix B Certification and Licensure

Standards for educator certification are set by the Professional Educator Standards Board (PESB) (RCW 28A.410.210) sets standards for educator certification and specifies the types of educator certificates to be issued and conditions for certification.[17]

The Superintendent of Public Instruction keeps records "of all teachers receiving certificates to teach in the common schools of the state," and issues certificates.[18]

Certificate roles include Teacher; Career and technical education; First peoples' language, culture, and oral tribal traditions; Administrator; and Educational staff associate.[19] Career and technical education types are Teacher, Director, and Career guidance specialist.[20]

Full Certification

WAC 181-79A-142 specifies the following certificate types.[21] Descriptions of the certificates are excerpted from those appearing on the OSPI website.[22]

Certificates for educators who qualify for a full teaching certificate include:

- Residency certificates – for completers of a teacher preparation program or those who have held a teaching certificate in another state with at least three years of out-of-state or out-of-country teaching experience.
- Professional certificates – for those who are National Board for Professional Teaching Standards (NBPTS) certified or who have attained an approved certification from another state.
- Initial certificates;
- Continuing certificates.

Career and technical education are classified by the following levels, analogous to the certificate types defined for non-CTE educators:[23]

- CTE Initial Certificate – the first-tier certificate for educators who have completed either the university route or the business and industry route program and hold the required experience.
- CTE Initial Renewal Certificate – for educators who have previously held or currently hold an Initial CTE Certificate.
- CTE Continuing Certificate – the second-tier certificate for educators who have held an Initial CTE Certificate and have met the requirements to upgrade their certificate.

17. RCW 28A.410.210: Washington professional educator standards board—Purpose—Powers and duties.
18. RCW 28A.300.040: Powers and duties.
19. WAC181-79A-140: Certificate roles.
20. WAC 181-77-005: Types of career and technical education certificates.
21. WAC 181-79A-142: Certificate types.
22. See "Teacher Certificate"
23. WAC181-77-012: Levels of career and technical education instructional certificates. Also, see OSPI Career and Technical Education Applicants

- CTE Continuing Renewal Certificate – for educators who have previously held a Continuing CTE Certificate.

Also included in the Full Certification category is:

- First Peoples' Language, Culture and Oral Traditions Certification – for educators who have completed a sovereign tribal government's language/culture teacher certification program.[24]

Substitute

- Substitute certificate – for educators who have completed all state of Washington program requirements and have been recommended for certification by their institution.

Limited Certification

Limited certificates, for educators who do not qualify for a full teaching certificate, include:

- Conditional certificate – for educators working with an employer that wants to employ them based on experience and expertise.
- Emergency substitute certificate – for educators who have been requested for an Emergency Substitute certificate by an employer and for those who have held or hold an expiring Emergency Substitute certificate and will be working with an employer to be certified again on an Emergency Substitute certificate.
- Intern substitute teacher certificate – for educators who are student teaching and needed to substitute in their mentor teacher's absence.
- Transitional certificate – for educators who hold a Continuing Teacher Certificate that has lapsed.

The limited CTE certificate includes a Conditional CTE Certificate for educators who do not qualify for a full teaching certificate.[25]

- CTE Conditional Certificate – initiated by a school district on the educator's behalf, based on experience and expertise in a specific specialty area.

Emergency Teachers

Emergency teacher certification allows educator preparation programs to recommend a candidate for this emergency certificate if the candidate has completed all program completion requirements except for one or more of the assessments. A candidate whose clinical practice hours have been waived or reduced under the recent PESB emergency rule would still be eligible for this certificate.[26]

24. https://app.leg.wa.gov/WAC/default.aspx?cite=181-79A-252
25. WAC 181-77-014: Requirements for limited certification.
26. WAC 181-79A-228: Emergency teacher certificates. https://ospi.k12.wa.us/sites/default/files/2023-02/schooldistrictpersonneladministratoruserguide1.pdf

Certification Classification in the Data

Table 19 shows the types of certifications held by Younger Educators and the classification as Full, Substitute, Limited or Emergency used in the analysis. A single certification level was associated with each educator's record. If an educator held more than one certification in a year, the prioritization was in this order: full, substitute, limited, emergency.

Table 20: Classification of certification codes.

	Full Certification		
E880716	Initial ESA	E330616	Professional ESA
E880916	Initial ESA (Renewal)	T330600	Professional Teacher
E230716	Continuing ESA	T330900	Professional Teacher (Renewal)
A310515	Residency Administrator (First Issue)	C110600	First Peoples' Language, Culture & Oral Traditions
A320515	Residency Administrator	TCTE500	CTE Continuing Teacher
E310516	Residency ESA (First Issue)	TCTE100	CTE Initial Teacher
E320516	Residency ESA	TCTE300	CTE Initial Teacher (Renewal)
T310600	Residency Teacher (First Issue)	CCTE101	CTE Probationary Teacher
T320500	Residency Teacher	CCTE102	CTE Probationary Teacher (Renewal)
T320900	Residency Teacher (Renewal)		
T320800	Residency Teacher (Renewal)		
	Substitute		
C260716	Substitute ESA	C260700	Substitute Teacher
	Limited		
C280700	Conditional Certificate	CCTE203	CTE Conditional Teacher
C270700	Emergency Substitute Teacher	CCTE205	CTE Conditional Teacher (Renewal)
C360500	Intern Substitute Teacher		
	Emergency		
C250716	Emergency ESA	C250700	Emergency Teacher

Appendix C: Geographic Locale

Geographic locale is an indicator that classifies territory in the U.S. into four types — City, Suburban, Town and Rural. The definition is based on geographic designations used by the U.S. Census Bureau. The Census Bureau collaborates with the U.S. Department of Education National Center for Education Statistics to assign locale designations to schools and school districts. Locale assignments are updated in response to population change.[27]

The tables in this study merge the detailed categories into City/Suburban and Town/Rural. Town–Fringe (31) is included in the City/Suburban grouping because of its proximity to an urban cluster. Table 21 shows the detailed classification categories and the assignment to the two categories.

Table 21: Geographic locale codes.

Major Category	Code	Description
		City/Suburban Grouping
City	11	**LARGE**: Territory inside an urbanized area and inside a principal city with population of 250,000 or more. Only schools within Seattle limits fall into this category.
	12	**MIDSIZE**: Territory inside an urbanized area and inside a principal city with population less than 250,000 and greater than or equal to 100,000. Examples: Lewis & Clark High School (Spokane); Fort Vancouver High School (Vancouver, Clark County).
	13	**SMALL**: Territory inside an urbanized area and inside a principal city with population less than 100,000. Examples: Central Kitsap High School (Silverdale, Kitsap County); Kennewick High School (Kennewick, Benton County).
Suburban	21	**LARGE:** Territory outside a principal city and inside an urbanized area with population of 250,000 or more. Examples: Ridgeline High School (Liberty Lake, Spokane County); Gig Harbor High School (Gig Harbor, Pierce County).
	22	**MIDSIZE**: Territory outside a principal city and inside an urbanized area with population less than 250,000 and greater than or equal to 100,000. Examples: Pasco Senior High School (Pasco, Franklin County); Ferndale High School (Ferndale, Whatcom County).
	23	**SMALL**: Territory outside a principal city and inside an urbanized area with population less than 100,000. Examples: Walla Walla High School (Walla Walla High School, Walla Walla County); Burlington Edison High School (Burlington, Skagit County).
Town	31	**FRINGE**: Territory inside an urban cluster that is less than or equal to 10 miles from an urbanized area. Examples: Stanwood High School (Stanwood, Snohomish County); Cashmere High School (Cashmere, Chelan County).

27. Geverdt, D. (2019). Education Demographic and Geographic Estimates Program (EDGE): Locale Boundaries File Documentation, 2017 (NCES 2018-115). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from http://nces.ed.gov/pubsearch. The 2021 locale data used in this study were downloaded from National Center for Education Statistics, "Locale Classification." Retrieved from https://nces.ed.gov/programs/edge/Geographic/LocaleBoundaries.

Major Category	Code	Description
		Town/Rural Grouping
Town	32	**DISTANT**: Territory inside an urban cluster that is more than 10 miles and less than or equal to 35 miles from an urbanized area. Examples: Othello High School (Othello, Grant County); Zillah High School (Zillah, Yakima County).
	33	**REMOTE**: Territory inside an urban cluster that is more than 35 miles from an urbanized area. Examples: Omak High School (Omak, Okanogan County); South Bend High School (South Bend, Pacific County).
Rural	41	**FRINGE**: Census-defined rural territory that is less than or equal to 5 miles from an urbanized area, as well as rural territory that is less than or equal to 2.5 miles from an urban cluster. Examples: Quincy High School (Quincy, Grant County); Napavine Jr Sr High School (Napavine, Lewis County).
	42	**DISTANT**: Census-defined rural territory that is more than 5 miles but less than or equal to 25 miles from an urbanized area, as well as rural territory that is more than 2.5 miles but less than or equal to 10 miles from an urban cluster. Examples: Kettle Falls High School (Kettle Falls, Stevens County); Toutle Lake High School (Toutle, Cowlitz County).
	43	**REMOTE**: Census-defined rural territory that is more than 25 miles from an urbanized area and is also more than 10 miles from an urban cluster. Examples: Cusick Jr Sr High School (Cusick, Pend Oreille County); Friday Harbor High School (Friday Harbor, San Juan County).