

Appendix B

School District Exit: Teacher Wage Progression and Assignment Status by Age and Gender

Monitoring School District Cost Pressures

A Report to the Wyoming
Joint Appropriations
Interim Committee and
the Joint Education
Interim Committee

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Research & Planning
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Teacher School District Exits

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As wages in teaching occupations continue to increase, analyzing transitions from district to district or between occupations may reveal potential labor pools and district labor demands. In Chapter 1, employment and wage data were presented over a two-year period using the Standard Occupational Classification (SOC) system. As discussed in Chapter 1, Wyoming’s average wage for all primary, secondary, and special education teachers in public schools is higher than the U.S. average and significantly higher than most surrounding states. However, little is known regarding wage changes as teachers change district employment or change occupations from year to year.

This appendix analyzes only teachers in public schools, and does not include those individuals who worked non-teaching jobs. Teachers are classified as “primary, secondary, and special education teachers” by the SOC classification system with a code of 25-2000. Further classification is dependent upon which grade levels a teacher is assigned to teach. Teacher occupations are broken down into a six-digit SOC code, such as secondary school teachers, except special education, which is coded as 25-2031. The SOC classification structure is presented in Chapter 1.

There are many different career paths a teacher can take from year to year. The primary goal of this chapter is to examine the transitional trends of 10 teacher occupations by age group and gender. Five transitions were examined between the 2011/12 to 2012/13 school years. **Figure B-1** displays the different transitions used in this chapter based on the retention status described in detail in Chapter 3. Teachers who stayed in

Figure B-1: Total, All Teachers Working in Public Schools, 2011/12 and 2012/13

Total Teachers = 6,881

		District	
		Same (N = 6,759, or 98.2%)	Different (N = 122, or 1.8%)
Occupation	Same (N = 6,046, or 87.9%)	No Change (NC) 5,992 87.1%	Location Change (LC) 54 0.8%
	Different (N = 835, or 12.1%)	Occupation Change (OC) 767 11.1%	Occupation and Location Change (OLC) 68 1.0%

Note: 562 teachers left public schools from 2011/12 to 2012/13; see Table B-1b, page B7

Source: Wyoming Department of Education Contract Staffing Files (WDE 602).

the same occupation and the same district over the two school years were labeled as no change (NC). Teachers who stayed in the same occupation but changed employment to another school district were labeled as location change (LC). Teachers who stayed in the same district but changed occupations were labeled occupation change (OC). Teachers who changed both occupation and school district were labeled occupation and location change (OLC). Finally, there were 562 teachers who were in Wyoming public schools one year but left public schools the following year.

To capture the transition trends of teachers, the number of teachers employed and the average annual wage was analyzed using the Wyoming Department of Education Contract Staffing Files (WDE 602). Age and gender were included to examine

the differences in transitions between specific demographic groups. For example, identifying the number of young and middle-aged teachers who change occupations and school districts over time can assist districts in meeting their staffing needs. It should be noted that this chapter focuses on teacher transitions between only one school year to another. Future research using longitudinal administrative data is warranted to understand the full breadth of teacher movement within occupations, school districts, and Wyoming's labor market as a whole.

The WDE staffing files included all those teachers contracted to work in Wyoming public schools for the 2011/12 and 2012/13 school years and their assignment status. The assignment status indicates which subjects and at what grade levels the teacher is contracted to teach in a given school year. In order to code the WDE contracted assignment status to the appropriate SOC classification, R&P used the highest grade level a teacher was able to teach. For example, a teacher contracted to teach mathematics for grades 6-12 would be classified as a secondary school teacher, except special and career/technical education (SOC 25-2031). Regardless of the number of assignments an individual in the WDE staffing file had, he or she was assigned a primary occupation and a primary school district. Primary school district was assigned to the district where that person earned the highest wages.

The WDE 602 file included the contracted wage for each individual teacher contracted to work for the two time periods. The contracted wage in the WDE 602 file was used in the wage analyses, except when identifying earnings after the teacher left public schools. R&P used Unemployment Insurance (UI) Wage Records to identify those individuals who did not continue employment

with Wyoming public schools. The UI wage records longitudinal administrative database is collected quarterly for unemployment insurance tax purposes. Each wage record contains ssn, year, quarter, employer, and wages. R&P currently maintains 22 years of wage records for approximately 92.0% of the employed individuals in Wyoming.

Of the 562 teachers who left working in public schools in Wyoming, R&P located 350 persons working in Wyoming or in 10 other states with whom R&P has data sharing agreements (see Figure A-3 in Appendix A, page A9, for a map of these 10 states).

Age and Gender

Table B-1a (see page B4) displays the data based on age and gender and the different transitional categories. The first column of Table B-1a indicates the district transition, while the second indicates the occupational transition. A total of 7,443 teachers with an average wage of \$58,075 in 2011/12 were used in the analyses. A total of 562 teachers left Wyoming public schools while 6,881 were retained in Wyoming public schools. Of those retained in Wyoming public schools 4,858 were female (70.6%). Nearly all those retained in Wyoming public schools increased their wages, with the exception of those ages 65 and older (-0.7%). Of those who were retained in Wyoming public schools, younger males (54 or younger) consistently earned higher wages regardless of transition type compared to younger females. All those who left Wyoming public schools showed a large decrease in wages, with the largest decrease for males ages 55-64 (80.0%) followed closely by females in the same age group (77.5%).

(Text continued on page B7)

Table B-1a: Public School Teacher Transition Activity Between School Districts and Occupations from 2011/12 to 2012/13 by Age and Gender

District Transition	Occupational Transition	Age Group	Total					
			2011/12		2012/13		Wage Change	
			N	ACW	N	ACW	\$	%
Total	Total	Total	7,443	\$58,075	7,231	\$57,328	-\$747	-1.3%
		20-24	207	\$44,964	206	\$44,856	-\$108	-0.2%
		25-34	1,893	\$50,896	1,865	\$51,047	\$151	0.3%
		35-44	1,854	\$57,718	1,832	\$58,141	\$422	0.7%
		45-54	1,857	\$62,250	1,832	\$62,169	-\$81	-0.1%
		55-64	1,543	\$63,915	1,421	\$60,310	-\$3,605	-5.6%
		65-Up	89	\$60,331	75	\$53,185	-\$7,146	-11.8%
Left Wyoming Public Schools	Total (2012/13 wage for this group comes from UI Wage Records Database)	Total	562	\$56,646	350	\$21,917	-\$34,729	-61.3%
		20-24	18	\$43,522	17	\$20,779	-\$22,744	-52.3%
		25-34	141	\$47,603	113	\$25,869	-\$21,734	-45.7%
		35-44	72	\$52,841	50	\$27,704	-\$25,137	-47.6%
		45-54	72	\$59,855	47	\$25,760	-\$34,095	-57.0%
		55-64	230	\$63,284	108	\$13,727	-\$49,557	-78.3%
		65-Up	29	\$57,594	15	\$21,076	-\$36,518	-63.4%
Retained in Wyoming Public Schools	Total	Total	6,881	\$58,192	6,881	\$59,129	\$937	1.6%
		20-24	189	\$45,101	189	\$47,021	\$1,920	4.3%
		25-34	1,752	\$51,161	1,752	\$52,670	\$1,510	3.0%
		35-44	1,782	\$57,915	1,782	\$58,995	\$1,079	1.9%
		45-54	1,785	\$62,347	1,785	\$63,128	\$781	1.3%
		55-64	1,313	\$64,026	1,313	\$64,141	\$116	0.2%
		65-Up	60	\$61,654	60	\$61,212	-\$442	-0.7%
Same District	Total	Total	6,759	\$58,314	6,759	\$59,273	\$959	1.6%
		20-24	176	\$45,299	176	\$47,146	\$1,847	4.1%
		25-34	1,691	\$51,185	1,691	\$52,779	\$1,593	3.1%
		35-44	1,756	\$58,013	1,756	\$59,067	\$1,054	1.8%
		45-54	1,765	\$62,395	1,765	\$63,222	\$827	1.3%
		55-64	1,311	\$64,012	1,311	\$64,148	\$136	0.2%
		65-Up	60	\$61,654	60	\$61,212	-\$442	-0.7%
	Same occupation	Total	5,992	\$58,428	5,992	\$59,431	\$1,003	1.7%
		20-24	145	\$45,567	145	\$47,254	\$1,687	3.7%
		25-34	1,490	\$51,143	1,490	\$52,648	\$1,505	2.9%
		35-44	1,544	\$58,036	1,544	\$59,131	\$1,095	1.9%
		45-54	1,567	\$62,586	1,567	\$63,443	\$857	1.4%
		55-64	1,190	\$63,997	1,190	\$64,428	\$432	0.7%
		65-Up	56	\$61,633	56	\$61,208	-\$425	-0.7%
Different Occupation	Total	767	\$57,425	767	\$58,040	\$614	1.1%	
	20-24	31	\$44,043	31	\$46,642	\$2,599	5.9%	
	25-34	201	\$51,497	201	\$53,745	\$2,247	4.4%	
	35-44	212	\$57,847	212	\$58,603	\$756	1.3%	
	45-54	198	\$60,877	198	\$61,466	\$588	1.0%	
	55-64	121	\$64,164	121	\$61,395	-\$2,770	-4.3%	
	65-Up	ND	\$61,944	ND	\$61,267	-\$677	-1.1%	
Different District	Total	Total	122	\$51,425	122	\$51,162	-\$263	-0.5%
		20-24	13	\$42,421	13	\$45,331	\$2,909	6.9%
		25-34	61	\$50,481	61	\$49,669	-\$812	-1.6%
		35-44	26	\$51,335	26	\$54,089	\$2,754	5.4%
		45-54	20	\$58,125	20	\$54,855	-\$3,270	-5.6%
		55-64	ND	\$72,916	ND	\$59,639	-\$13,277	-18.2%
	Same occupation	Total	54	\$52,211	54	\$52,414	\$203	0.4%
		20-24	6	\$42,528	6	\$44,404	\$1,877	4.4%
		25-34	30	\$51,060	30	\$50,363	-\$697	-1.4%
		35-44	10	\$52,402	10	\$57,535	\$5,133	9.8%
		45-54	8	\$63,556	8	\$59,715	-\$3,840	-6.0%
	Different Occupation	Total	68	\$50,800	68	\$50,168	-\$632	-1.2%
		20-24	7	\$42,330	7	\$46,125	\$3,794	9.0%
		25-34	31	\$49,920	31	\$48,997	-\$923	-1.8%
35-44		16	\$50,668	16	\$51,935	\$1,268	2.5%	
45-54		12	\$54,504	12	\$51,615	-\$2,889	-5.3%	
55-64	ND	\$72,916	ND	\$59,639	-\$13,277	-18.2%		

ACW = Average contract wage (from WDE 602).

ND = Non-disclosable due to confidentiality.

Sources: Wyoming Department of Education Contract Staffing Files (WDE 602) and Research & Planning Unemployment Insurance Wage Records.

Table B-1a Continued from page B4

		Females						
District Transition	Occupational Transition	Age Group	2011/12		2012/13		Wage Change	
			N	ACW	N	ACW	\$	%
Total	Total	Total	5,258	\$56,828	5,102	\$56,119	-\$709	-1.2%
		20-24	173	\$44,654	172	\$44,426	-\$229	-0.5%
		25-34	1,282	\$49,880	1,263	\$49,825	-\$55	-0.1%
		35-44	1,285	\$55,918	1,268	\$56,369	\$451	0.8%
		45-54	1,328	\$60,678	1,312	\$60,615	-\$63	-0.1%
		55-64	1,128	\$62,975	1,034	\$60,091	-\$2,884	-4.6%
		65-Up	62	\$59,019	53	\$49,263	-\$9,756	-16.5%
Left Wyoming Public Schools	Total (2012/13 wage for this group comes from UI Wage Records Database)	Total	400	\$55,351	244	\$20,128	-\$35,224	-63.6%
		20-24	ND	\$44,724	ND	\$19,859	-\$24,865	-55.6%
		25-34	99	\$46,823	80	\$24,025	-\$22,798	-48.7%
		35-44	50	\$51,168	33	\$24,107	-\$27,061	-52.9%
		45-54	48	\$58,157	32	\$22,864	-\$35,293	-60.7%
		55-64	166	\$61,972	72	\$13,918	-\$48,054	-77.5%
		65-Up	ND	\$54,408	ND	\$13,989	-\$40,419	-74.3%
Retained in Wyoming Public Schools	Total	Total	4,858	\$56,950	4,858	\$57,927	\$977	1.7%
		20-24	158	\$44,648	158	\$46,602	\$1,955	4.4%
		25-34	1,183	\$50,136	1,183	\$51,570	\$1,434	2.9%
		35-44	1,235	\$56,111	1,235	\$57,231	\$1,121	2.0%
		45-54	1,280	\$60,773	1,280	\$61,559	\$786	1.3%
		55-64	962	\$63,148	962	\$63,547	\$399	0.6%
		65-Up	40	\$61,556	40	\$60,727	-\$829	-1.3%
Same District	Total	Total	4,775	\$57,069	4,775	\$58,060	\$991	1.7%
		20-24	147	\$44,832	147	\$46,709	\$1,877	4.2%
		25-34	1,144	\$50,140	1,144	\$51,658	\$1,518	3.0%
		35-44	1,219	\$56,182	1,219	\$57,285	\$1,103	2.0%
		45-54	1,264	\$60,854	1,264	\$61,664	\$810	1.3%
		55-64	961	\$63,149	961	\$63,550	\$401	0.6%
		65-Up	40	\$61,556	40	\$60,727	-\$829	-1.3%
	Same occupation	Total	4,133	\$57,084	4,133	\$58,091	\$1,007	1.8%
		20-24	119	\$45,141	119	\$46,805	\$1,664	3.7%
		25-34	977	\$49,967	977	\$51,337	\$1,371	2.7%
		35-44	1,046	\$56,072	1,046	\$57,209	\$1,137	2.0%
		45-54	1,096	\$60,954	1,096	\$61,812	\$858	1.4%
		55-64	858	\$62,946	858	\$63,564	\$618	1.0%
		65-Up	37	\$61,502	37	\$60,575	-\$927	-1.5%
	Different Occupation	Total	642	\$56,973	642	\$57,860	\$887	1.6%
		20-24	ND	\$43,519	ND	\$46,299	\$2,780	6.4%
		25-34	167	\$51,155	167	\$53,533	\$2,378	4.6%
35-44		173	\$56,851	173	\$57,750	\$900	1.6%	
45-54		168	\$60,206	168	\$60,699	\$493	0.8%	
55-64		103	\$64,841	103	\$63,434	-\$1,407	-2.2%	
65-Up		ND	\$62,220	ND	\$62,609	\$389	0.6%	
Different District	Total	Total	83	\$50,080	83	\$50,244	\$164	0.3%
		20-24	ND	\$42,183	ND	\$45,179	\$2,996	7.1%
		25-34	39	\$50,022	39	\$48,991	-\$1,031	-2.1%
		35-44	16	\$50,650	16	\$53,118	\$2,468	4.9%
		45-54	16	\$54,320	16	\$53,248	-\$1,072	-2.0%
	Same occupation	Total	34	\$50,532	34	\$52,057	\$1,525	3.0%
		20-24	ND	\$42,528	ND	\$44,404	\$1,877	4.4%
		25-34	18	\$51,054	18	\$50,697	-\$357	-0.7%
		35-44	5	\$48,681	5	\$57,522	\$8,841	18.2%
		45-54	ND	\$60,107	ND	\$60,672	\$565	0.9%
	Different Occupation	Total	49	\$49,766	49	\$48,986	-\$780	-1.6%
		20-24	ND	\$41,770	ND	\$46,109	\$4,339	10.4%
		25-34	21	\$49,137	21	\$47,528	-\$1,609	-3.3%
		35-44	11	\$51,545	11	\$51,117	-\$428	-0.8%
		45-54	ND	\$51,690	ND	\$49,873	-\$1,817	-3.5%
		55-64	ND	\$62,200	ND	\$60,777	-\$1,423	-2.3%

ACW = Average contract wage (from WDE 602).

ND = Non-disclosable due to confidentiality.

Sources: Wyoming Department of Education Contract Staffing Files (WDE 602) and Research & Planning Unemployment Insurance Wage Records.

Table B-1a Continued from page B5

Males								
District Transition	Occupational Transition	Age Group	2011/12		2012/13		Wage Change	
			N	ACW	N	ACW	\$	%
Total	Total	Total	2,185	\$61,075	2,129	\$60,225	-\$850	-1.4%
		20-24	34	\$46,537	34	\$47,031	\$494	1.1%
		25-34	611	\$53,027	602	\$53,609	\$582	1.1%
		35-44	569	\$61,783	564	\$62,122	\$339	0.5%
		45-54	529	\$66,197	520	\$66,090	-\$106	-0.2%
		55-64	415	\$66,470	387	\$60,893	-\$5,577	-8.4%
		65-Up	27	\$63,343	22	\$62,632	-\$711	-1.1%
Left Wyoming Public Schools	Total (2012/13 wage for this group comes from UI Wage Records Database)	Total	162	\$59,844	106	\$26,036	-\$33,808	-56.5%
		20-24	ND	\$37,511	ND	\$25,068	-\$12,443	-33.2%
		25-34	42	\$49,442	33	\$30,339	-\$19,103	-38.6%
		35-44	22	\$56,642	17	\$34,686	-\$21,956	-38.8%
		45-54	24	\$63,252	15	\$31,938	-\$31,314	-49.5%
		55-64	64	\$66,689	36	\$13,345	-\$53,345	-80.0%
		65-Up	ND	\$67,608	ND	\$67,140	-\$468	-0.7%
Retained in Wyoming Public Schools	Total	Total	2,023	\$61,174	2,023	\$62,017	\$843	1.4%
		20-24	31	\$47,411	31	\$49,156	\$1,746	3.7%
		25-34	569	\$53,291	569	\$54,958	\$1,667	3.1%
		35-44	547	\$61,990	547	\$62,975	\$985	1.6%
		45-54	505	\$66,337	505	\$67,105	\$768	1.2%
		55-64	351	\$66,430	351	\$65,770	-\$660	-1.0%
		65-Up	20	\$61,850	20	\$62,181	\$331	0.5%
Same District	Total	Total	1,984	\$61,309	1,984	\$62,191	\$882	1.4%
		20-24	29	\$47,664	29	\$49,363	\$1,698	3.6%
		25-34	547	\$53,372	547	\$55,123	\$1,751	3.3%
		35-44	537	\$62,168	537	\$63,112	\$944	1.5%
		45-54	501	\$66,281	501	\$67,151	\$871	1.3%
		55-64	350	\$66,381	350	\$65,791	-\$590	-0.9%
		65-Up	20	\$61,850	20	\$62,181	\$331	0.5%
	Same occupation	Total	1,859	\$61,414	1,859	\$62,409	\$994	1.6%
		20-24	26	\$47,518	26	\$49,307	\$1,789	3.8%
		25-34	513	\$53,384	513	\$55,145	\$1,761	3.3%
		35-44	498	\$62,160	498	\$63,169	\$1,008	1.6%
		45-54	471	\$66,385	471	\$67,240	\$854	1.3%
		55-64	332	\$66,711	332	\$66,662	-\$49	-0.1%
		65-Up	19	\$61,889	19	\$62,441	\$553	0.9%
	Different Occupation	Total	125	\$59,750	125	\$58,961	-\$788	-1.3%
		20-24	ND	\$48,930	ND	\$49,843	\$913	1.9%
		25-34	34	\$53,180	34	\$54,784	\$1,604	3.0%
35-44		39	\$62,265	39	\$62,384	\$119	0.2%	
45-54		30	\$64,636	30	\$65,759	\$1,123	1.7%	
55-64		18	\$60,290	18	\$49,723	-\$10,567	-17.5%	
65-Up		ND	\$61,116	ND	\$57,242	-\$3,874	-6.3%	
Different District	Total	Total	39	\$54,288	39	\$53,116	-\$1,172	-2.2%
		20-24	ND	\$43,732	ND	\$46,164	\$2,432	5.6%
		25-34	22	\$51,294	22	\$50,871	-\$423	-0.8%
		35-44	10	\$52,430	10	\$55,642	\$3,212	6.1%
		45-54	ND	\$73,342	ND	\$61,283	-\$12,059	-16.4%
	Same occupation	Total	20	\$83,631	ND	\$58,500	-\$25,131	-30.0%
		20-24	20	\$55,067	20	\$53,021	-\$2,045	-3.7%
		20-24	ND	ND	ND	ND	ND	ND
		25-34	12	\$51,067	12	\$49,860	-\$1,207	-2.4%
		35-44	5	\$56,123	5	\$57,548	\$1,425	2.5%
	Different Occupation	45-54	ND	\$69,304	ND	\$58,121	-\$11,183	-16.1%
		Total	19	\$53,468	19	\$53,216	-\$252	-0.5%
		20-24	ND	\$43,732	ND	\$46,164	\$2,432	5.6%
		25-34	10	\$51,565	10	\$52,083	\$518	1.0%
	35-44	5	\$48,737	5	\$53,736	\$4,999	10.3%	
	45-54	ND	\$85,458	ND	\$70,770	-\$14,688	-17.2%	
	55-64	ND	\$83,631	ND	\$58,500	-\$25,131	-30.0%	

ACW = Average contract wage (from WDE 602).

ND = Non-disclosable due to confidentiality.

Sources: Wyoming Department of Education Contract Staffing Files (WDE 602) and Research & Planning Unemployment Insurance Wage Records.

(Text continued from page B3)

A total of 5,992 did not change either their school district or their occupation with a large proportion (96.4%) falling between the ages of 25 to 64. The category of younger individuals who stayed in the same district regardless of occupation change, on average, increased their average annual wage compared to those who changed districts. There were slight decreases in wages for categories of older individuals who stayed in the same district. These results suggest that as younger individuals continue to gain experience in a single school district their pay step may increase while older individuals are preparing to enter retirement, resulting in a decrease in average wage. Currently, R&P cannot verify whether individuals are preparing to retire (e.g., dropping certain coaching and other activities) or have entered full retirement.

Females who changed both district and occupation (N = 49) saw a total decrease in average wages of -1.6%. Four of the five age categories saw decreases in average annual wages while the category of younger females (20-24) saw a large increase (10.4%).

The reason behind these differences in wage change by age category is not yet known but may be related to work/family dynamics. Further, younger females and males who remained in the same district but changed occupation showed significant wage increases, which may indicate that along with an increase in wages due to pay schedule increases, changing jobs held by older teachers who have retired has a positive effect on wage progression.

On average, teachers left employment in public schools for lower annual wages compared to Wyoming workers as a whole. Wyoming wage data is available at http://doe.state.wy.us/LMI/earnings_tables/2013/WR_Demographics2012/Industry/by_industry181.html.

Table B-1b displays the re-employment rate of individuals who left the school district by age and gender. Younger females (ages 20-34) remained employed at higher rates than older females (age 35+). As women continue to postpone the age in which they have children, these differences may be explained by the lower rates of employment at

Table B-1b: Re-employment Rates for Teachers Who Left Wyoming Public Schools from 2011/12 to 2012/13 by Age and Gender

Age Group	Total			Females			Males		
	Left Public Schools After 2011/12	Employed in Another Industry in 2012/13		Left Public Schools After 2011/12	Employed in Another Industry in 2012/13		Left Public Schools After 2011/12	Employed in Another Industry in 2012/13	
	N	N	%	N	N	%	N	N	%
20-24	18	17	94.4%	ND	ND		ND	ND	
25-34	141	113	80.1%	99	80	80.8%	42	33	78.6%
35-44	72	50	69.4%	50	33	66.0%	22	17	77.3%
45-54	72	47	65.3%	48	32	66.7%	24	15	62.5%
55-64	230	108	47.0%	166	72	43.4%	64	36	56.3%
65-Up	29	15	51.7%	ND	ND		ND	ND	
Total	562	350	62.3%	400	244	61.0%	162	106	65.4%

ND = Non-disclosable due to confidentiality.

Source: Wyoming Department of Education Contract Staffing Files (WDE 602).

Source: Research & Planning Unemployment Insurance Wage Records.

older ages. Younger women (ages 20-34) may decide that teaching is not the occupation they wish to continue and leave the district for employment in a different industry and occupation.

As seen in Chapter 3, Table 3-4b, teachers experience a decrease in wage if they move from school district employment to another industry. However, those individuals less than 54 years of age see increases in key industries (i.e., natural resources & mining and leisure & hospitality). As seen in Table B-1b, males (65.4%) were more likely to be employed after leaving public schools than females (61.0%). Males ages 35-44 were much more likely (77.3%) to be employed than females (66.0%). These differences in gender may be due to males having higher wage earning opportunities outside public schools in Wyoming's natural resources & mining industry.

Given that gender and age play a role in the rate of re-employment after leaving school districts, the occupation of the teachers leaving the school districts is of interest. For example, R&P has completed research on teaching licensing data (see Appendix A) where certain teachers holding specific endorsements can now be systematically studied to understand public school exit rates.

Change in Occupation

The first section of this appendix outlines the specific transitions (district and occupation) by gender and age group. This section addresses specific occupational transitions within and between districts. The 5,992 individuals who did not change district or occupation were analyzed at the occupational level (see **Table B-2**, page B10).

Overall, these individuals experienced an increase in wages of 1.7%. All those who stayed in the same district and occupation in the 10 teacher occupations increased their average annual wage with special education teachers, secondary school (25-2054) having the largest increase (2.2%).

In terms of those who stayed in the same district but changed occupation, all but two individuals increased their average annual wage. As noted in the previous section, this result may be due to teachers increasing their step increases in pay due to experience with the same district. However, those individuals who changed occupations from secondary school to middle school and those who went from middle school to elementary school in both cases saw a slight decrease of 0.3%.

Those who changed districts but remained in the same occupation who were contracted to teach special education in elementary and middle school saw a significant increase in average annual wage (6.6% and 18.9% respectively). This result may indicate that as the need for special education teachers increases around the state, teachers will change districts for an increase in wages when positions become available. Middle and secondary school movers saw slight decreases in average annual wage (3.4% and 2.0% respectively). It should be noted that the number of individuals in the above sample was small so these conclusions should be interpreted with caution.

On average, those who changed both district and occupation from lower to higher grade levels increased their average annual wage while those who changed from a higher to lower grade levels decreased their annual wage. All special education occupations with the exception of those who moved from elementary education to kindergarten increased their annual wage regardless

of grade level. Again, the sample size was relatively small and caution should be used when interpreting results.

Thus far all analyses have involved teaching occupations only (SOC 25-2000). However, teachers often change to an occupation outside of teaching. Teachers who changed from teacher occupations to non-teaching occupations had the largest degree of variability in annual wage. Elementary and secondary school teachers who changed occupations to education administrators had the highest wage increases (31.9% and 26.7% respectively). Conversely, secondary school teachers who changed to coaches and scouts saw a 90.4% decrease in their wages. Further, special education teachers, preschool, kindergarten, and elementary school that changed to all other teachers saw a decrease of 12.0%. These results may be due to full-time teachers entering retirement but continuing to work as coaches or substitute teachers.

Conclusion

Wyoming teachers have significantly higher wages compared to the U.S. and surrounding states. Occupational and district change within the state may explain some of the variability observed in teacher wage progression. This chapter focused on the specific transitions teachers make within the labor market with gender and age playing significant roles in wage progression.

Further study is needed to ascertain consistent patterns regarding the influence of certain transitions and their effect on wages is still uncertain. A teacher who decides to remain in the same district regardless of whether they change occupations seems

to allow for steady increases in wages. As mentioned earlier, this result is most likely due to step increases on a district's pay schedule. However, Wyoming school districts vary widely regarding pay schedules and the influence district experience and education have on wage progression. As evidenced from the data presented in this chapter, those teachers who changed districts experienced, on average, a decrease in average annual wage. The differing pay schedules between districts may be an explanation of these decreases.

The cost of recruitment for districts and job seekers can be significant. In order to assuage costs districts can look within their internal labor market for filling vacancies across teaching occupations. District administrators could encourage teachers who are already working in their districts to obtain the credentials needed in order to teach subjects and grade levels that are expected to incur a high recruitment cost in the future. See Appendix A of this publication for a more in-depth analysis of the labor supply of teachers in Wyoming using Professional Teaching Standard Board (PTSB) licensing data.

Future research using administrative databases to explore the specific circumstances for people who change districts or occupations is needed. For instance, if a teacher retires from full-time teaching but remains available as a substitute or coach, he or she will continue to play a role in the district's labor supply. The specific family and work characteristics that determine if and when a teacher will change occupations or change districts should be a focus of future research. Family (e.g., spouse's career, children) and personal (e.g., retirement, health) influences are key factors of a person's decision to change occupations or employers.

Table B-2: **Individuals Who Transitioned from One Teaching Occupation to Another Within Wyoming Public Schools, 2011/12 to 2012/13**

	Occupation		Total		Average Contract Wage		Wage Change	
	2011/12	2012/13	N	%	11/12	12/13	\$	%
Same Occupation	Secondary School Teachers, Except Special and Career/Technical Education (25-2031)	Secondary School Teachers, Except Special and Career/Technical Education (25-2031)	1,662	27.7%	\$60,534	\$61,359	\$824	1.4%
	Elementary School Teachers, Except Special Education (25-2021)	Elementary School Teachers, Except Special Education (25-2021)	1,633	27.3%	\$56,256	\$57,265	\$1,008	1.8%
	Middle School Teachers, Except Special and Career/Technical Education (25-2022)	Middle School Teachers, Except Special and Career/Technical Education (25-2022)	1,075	17.9%	\$59,185	\$60,354	\$1,169	2.0%
	Career/Technical Education Teachers, Secondary School (25-2032)	Career/Technical Education Teachers, Secondary School (25-2032)	379	6.3%	\$60,726	\$61,872	\$1,145	1.9%
	Special Education Teachers, Secondary School (25-2054)	Special Education Teachers, Secondary School (25-2054)	299	5.0%	\$58,130	\$59,409	\$1,278	2.2%
	Special Education Teachers, Middle School (25-2053)	Special Education Teachers, Middle School (25-2053)	297	5.0%	\$58,337	\$59,530	\$1,192	2.0%
	Kindergarten Teachers, Except Special Education (25-2012)	Kindergarten Teachers, Except Special Education (25-2012)	290	4.8%	\$54,226	\$55,131	\$905	1.7%
	Special Education Teachers, Preschool, Kindergarten, and Elementary School (25-2041)	Special Education Teachers, Preschool, Kindergarten, and Elementary School (25-2041)	283	4.7%	\$57,265	\$58,114	\$849	1.5%
	Career/Technical Education Teachers, Middle School (25-2023)	Career/Technical Education Teachers, Middle School (25-2023)	61	1.0%	\$61,219	\$62,159	\$940	1.5%
	Preschool Teachers, Except Special Education (25-2011)	Preschool Teachers, Except Special Education (25-2011)	13	0.2%	\$46,974	\$47,544	\$570	1.2%
Total	Total	5,992	100.0%	\$58,428	\$59,431	\$1,003	1.7%	
Same District	Elementary School Teachers, Except Special Education (25-2021)	Middle School Teachers, Except Special and Career/Technical Education (25-2022)	231	30.1%	\$59,632	\$60,635	\$1,003	1.7%
	Secondary School Teachers, Except Special and Career/Technical Education (25-2031)	Middle School Teachers, Except Special and Career/Technical Education (25-2022)	56	7.3%	\$60,527	\$60,364	-\$163	-0.3%
	Kindergarten Teachers, Except Special Education (25-2012)	Elementary School Teachers, Except Special Education (25-2021)	52	6.8%	\$50,712	\$52,106	\$1,394	2.7%
	Kindergarten Teachers, Except Special Education (25-2012)	Middle School Teachers, Except Special and Career/Technical Education (25-2022)	52	6.8%	\$57,727	\$59,598	\$1,870	3.2%
	Middle School Teachers, Except Special and Career/Technical Education (25-2022)	Elementary School Teachers, Except Special Education (25-2021)	34	4.4%	\$53,967	\$53,831	-\$136	-0.3%
	Middle School Teachers, Except Special and Career/Technical Education (25-2022)	Secondary School Teachers, Except Special and Career/Technical Education (25-2031)	32	4.2%	\$57,847	\$60,290	\$2,443	4.2%
	Elementary School Teachers, Except Special Education (25-2021)	Kindergarten Teachers, Except Special Education (25-2012)	30	3.9%	\$51,192	\$53,161	\$1,968	3.8%
	Special Education Teachers, Preschool, Kindergarten, and Elementary School (25-2041)	Elementary School Teachers, Except Special Education (25-2021)	27	3.5%	\$51,434	\$53,506	\$2,072	4.0%
	Special Education Teachers, Middle School (25-2053)	Special Education Teachers, Preschool, Kindergarten, and Elementary School (25-2041)	19	2.5%	\$54,112	\$54,931	\$819	1.5%
	Special Education Teachers, Secondary School (25-2054)	Special Education Teachers, Middle School (25-2053)	15	2.0%	\$61,561	\$62,119	\$558	0.9%
Balance		219	28.6%					
Total	Total	767	100.0%	\$57,425	\$58,040	\$614	1.1%	

ND = Non-disclosable due to confidentiality.
 Source: Wyoming Department of Education Contract Files (WDE 602).

(Table continued on page B11)

(Table continued from page B10)

Table B-2: **Individuals Who Transitioned from One Teaching Occupation to Another Within Wyoming Public Schools, 2011/12 to 2012/13**

Occupation		Total		Average Contract Wage		Wage Change		
				11/12	12/13	\$	%	
2011/12	2012/13	N	%					
Same District Different (Nonteaching) Occupation ^a	Elementary School Teachers, Except Special Education (25-2021)	All Other Teachers, Primary, Secondary, and Adult (25-3999)	11		\$63,110	\$63,302	\$192	0.3%
	Elementary School Teachers, Except Special Education (25-2021)	Training and Development Specialists (13-1151)	10		\$62,451	\$63,889	\$1,437	2.3%
	Elementary School Teachers, Except Special Education (25-2021)	Education Administrators, Elementary and Secondary School (11-9032)	6		\$60,787	\$80,149	\$19,363	31.9%
	Secondary School Teachers, Except Special and Career/Technical Education (25-2031)	Education Administrators, Elementary and Secondary School (11-9032)	5		\$61,090	\$77,379	\$16,289	26.7%
	Middle School Teachers, Except Special and Career/Technical Education (25-2022)	Training and Development Specialists (13-1151)	5		\$60,821	\$56,125	-\$4,696	-7.7%
	Special Education Teachers, Secondary School (25-2054)	Educational, Career/Technical, and School Counselors (21-1012)	5		\$65,965	\$67,732	\$1,766	2.7%
	Secondary School Teachers, Except Special and Career/Technical Education (25-2031)	Coaches and Scouts (27-2022)	ND		\$49,434	\$4,765	-\$44,670	-90.4%
	Special Education Teachers, Preschool, Kindergarten, and Elementary School (25-2041)	All Other Teachers, Primary, Secondary, and Adult (25-3999)	ND		\$52,006	\$45,780	-\$6,226	-12.0%
	Secondary School Teachers, Except Special and Career/Technical Education (25-2031)	Educational, Guidance, School, and Vocational Counselors (21-1012)	ND		\$68,032	\$65,577	-\$2,455	-3.6%
	Special Education Teachers, Preschool, Kindergarten, and Elementary School (25-2041)	Educational, Guidance, School, and Vocational Counselors (21-1012)	ND		\$58,251	\$58,638	\$387	0.7%

^aNon-teaching occupations within the same district are a subset of different occupations within the same district and are included in the total of 767 on page B10.

ND = Non-disclosable due to confidentiality.

Source: Wyoming Department of Education Contract Files (WDE 602).

(Table continued on page B12)

(Table continued from page B11)

Table B-2: **Individuals Who Transitioned from One Teaching Occupation to Another Within Wyoming Public Schools, 2011/12 to 2012/13**

	Occupation		Total		Average Contract Wage		Wage Change	
	2011/12	2012/13	N	%	11/12	12/13	\$	%
Same Occupation	Secondary School Teachers, Except Special and Career/Technical Education (25-2031)	Secondary School Teachers, Except Special and Career/Technical Education (25-2031)	24	44.4%	\$55,408	\$54,283	-\$1,125	-2.0%
	Elementary School Teachers, Except Special Education (25-2021)	Elementary School Teachers, Except Special Education (25-2021)	18	33.3%	\$48,530	\$49,936	\$1,407	2.9%
	Middle School Teachers, Except Special and Career/Technical Education (25-2022)	Middle School Teachers, Except Special and Career/Technical Education (25-2022)	ND	ND	\$53,394	\$51,567	-\$1,828	-3.4%
	Kindergarten Teachers, Except Special Education (25-2012)	Kindergarten Teachers, Except Special Education (25-2012)	ND	ND	\$46,250	\$48,140	\$1,890	4.1%
	Special Education Teachers, Middle School (25-2053)	Special Education Teachers, Middle School (25-2053)	ND	ND	\$42,788	\$50,854	\$8,067	18.9%
	Special Education Teachers, Preschool, Kindergarten, and Elementary School (25-2041)	Special Education Teachers, Preschool, Kindergarten, and Elementary School (25-2041)	ND	ND	\$61,700	\$65,750	\$4,050	6.6%
	Special Education Teachers, Secondary School (25-2054)	Special Education Teachers, Secondary School (25-2054)	ND	ND	\$55,955	\$55,600	-\$355	-0.6%
Total	Total	54	100.0%	\$52,211	\$52,414	\$203	0.4%	
Different District	Secondary School Teachers, Except Special and Career/Technical Education (25-2031)	Middle School Teachers, Except Special and Career/Technical Education (25-2022)	12	17.6%	\$51,670	\$51,098	-\$572	-1.1%
	Elementary School Teachers, Except Special Education (25-2021)	Middle School Teachers, Except Special and Career/Technical Education (25-2022)	8	11.8%	\$44,500	\$44,794	\$294	0.7%
	Middle School Teachers, Except Special and Career/Technical Education (25-2022)	Elementary School Teachers, Except Special Education (25-2021)	ND	ND	\$53,061	\$52,183	-\$879	-1.7%
	Middle School Teachers, Except Special and Career/Technical Education (25-2022)	Secondary School Teachers, Except Special and Career/Technical Education (25-2031)	ND	ND	\$51,866	\$53,049	\$1,184	2.3%
	Special Education Teachers, Secondary School (25-2054)	Special Education Teachers, Middle School (25-2053)	ND	ND	\$56,368	\$56,498	\$130	0.2%
	Special Education Teachers, Secondary School (25-2054)	Special Education Teachers, Preschool, Kindergarten, and Elementary School (25-2041)	ND	ND	\$50,316	\$49,647	-\$669	-1.3%
	Special Education Teachers, Middle School (25-2053)	Special Education Teachers, Secondary School (25-2054)	ND	ND	\$46,037	\$49,438	\$3,402	7.4%
	Kindergarten Teachers, Except Special Education (25-2012)	Elementary School Teachers, Except Special Education (25-2021)	ND	ND	\$44,900	\$47,375	\$2,475	5.5%
	Elementary School Teachers, Except Special Education (25-2021)	Kindergarten Teachers, Except Special Education (25-2012)	ND	ND	\$56,673	\$55,641	-\$1,032	-1.8%
	Special Education Teachers, Middle School (25-2053)	Special Education Teachers, Preschool, Kindergarten, and Elementary School (25-2041)	ND	ND	\$42,853	\$44,423	\$1,570	3.7%
Balance		48	70.6%					
Total	Total	68	100.0%	\$50,800	\$50,168	-\$632	-1.2%	

ND = Non-disclosable due to confidentiality.
 Source: Wyoming Department of Education Contract Files (WDE 602).



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