

Laying the Groundwork: *Information on Wyoming Superintendent and Principal Qualifications, Supply, and Demand*

prepared for
Wyoming Department of Education
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EXECUTIVE SUMMARY

Education policymakers across the state of Wyoming are pausing at the threshold of the 21st century to take stock of school and district leadership and plan to meet future leadership challenges. This report, by Mid-continent Research for Education and Learning (McREL), provides background information for policymakers in developing common understandings of demand, supply, and qualification issues in the Wyoming education leadership workforce. Sponsored by a contract with the Wyoming Department of Education (WDE), this report and analysis are intended to support planning and implementation efforts to meet the challenge of education reform and the issues described in this report.

The report begins with background information on the demographic changes affecting Wyoming public education; this section is followed by a short section on the methodology used for this report. The next section provides a general description of the principal and superintendent workforces, which is followed by a short section on leader certification. The next sections focus on, first, principal and, then, superintendent demand and supply issues. Information on demand issues revolves around attrition and transfers. Information on supply issues focuses on the sources of Wyoming's education leaders, that is, the jobs these leaders held before they became principals or superintendents. The report concludes with a short summary and discussion.

DEMOGRAPHIC TRENDS FACING WYOMING EDUCATION

Enrollment in Wyoming public schools has steadily declined over the past eight years and is expected to continue to decline for the next 10 years. Figure 1 shows enrollment trends by region within the state from 1993 through 2000. The regions used here are county based and were taken from the Wyoming Department of Employment, which uses these regions to report labor force data for the state (see <http://lmi.state.wy.us/>). A table showing the relationship between districts, regions, and locale is located in Appendix A.

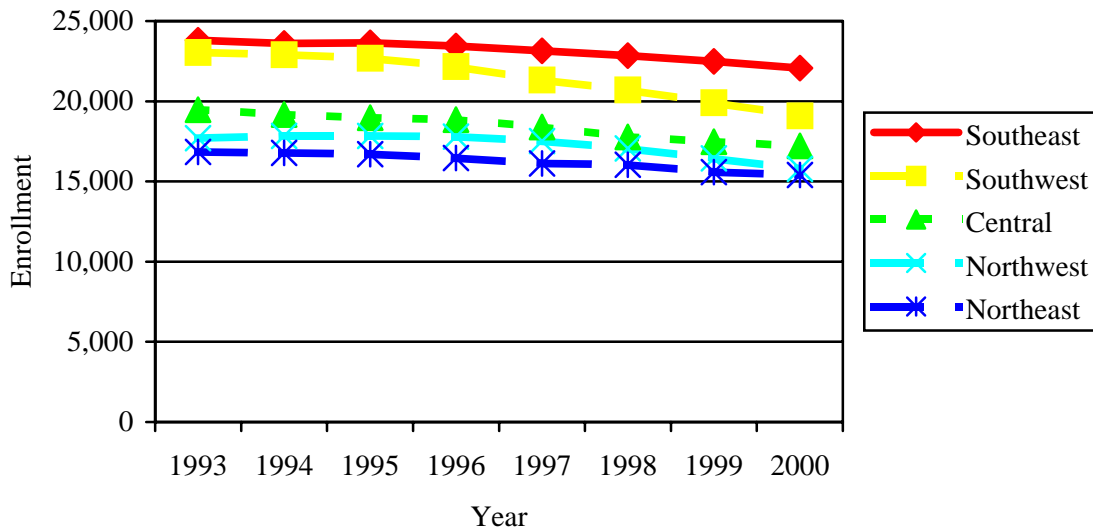


Figure 1: Wyoming Enrollment Trends by Region

Source: WDE Student Enrollment Data

Total enrollment in 1993 was about 100,000, which declined to about 90,000 by 2000. The fastest decline occurred in the southwest region of the state, where enrollment decreased by 17 percent. The proportion of students in each region remained steady. In 2000, about a quarter of all students lived in the southeast, and about 17 percent lived in the northeast.

The Wyoming Department of Administration forecasts that these declines will continue through 2008. Figure 2 shows projected school-age population for Wyoming by region from 2000 through 2008.

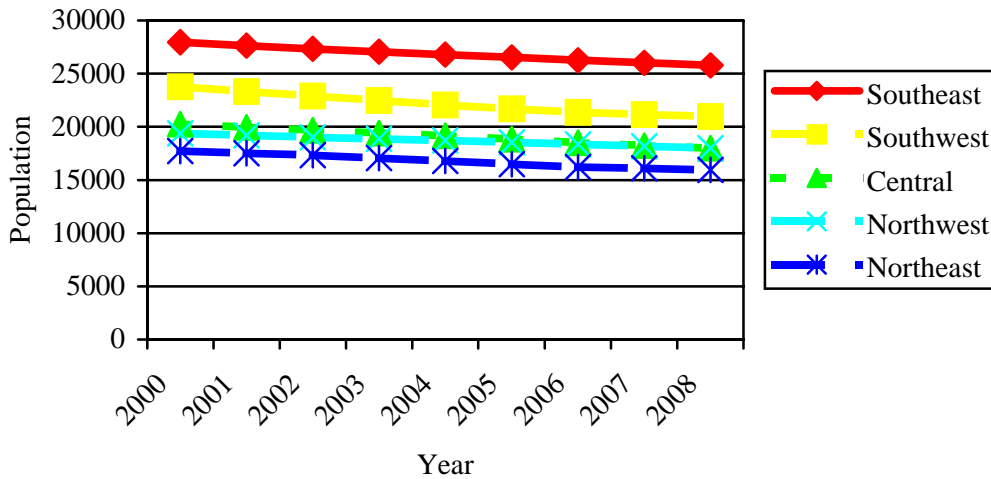


Figure 2: School-Age Population Projection

Source: Wyoming Department of Administration: <http://eadiv.state.wy.us/pop/pop.htm>

The Wyoming school-age population is forecasted to decline by 10 percent between 2000 and 2008; relatively equal declines are forecasted in all regions of the state.

Information on population and enrollment changes by locale is contained in Appendix B. These data show that the majority of Wyoming’s school-age population lives in small towns, followed by large towns/cities and then rural. All locales have experienced enrollment declines; these declines are forecasted to continue through 2008 at relatively similar rates for all locales. The largest declines have occurred and are expected to continue in small towns.

Unlike enrollment, the number of teachers and schools has increased. Between 1993 and 2000 the number of teachers increased by about five percent, from 6,890 to 7,217. The number of schools remained fairly constant at about 390.

ANALYSIS METHODOLOGY

This report uses data provided by the Wyoming Department of Education (WDE). The data on education professionals are drawn from the Professional Staff List Report completed by districts each fall. The enrollment data include membership, ethnicity, and participation in free and reduced lunch at the school level, which was summed to the district level to create district enrollment information.

The central limitation of this report is the quality of the data provided by districts in the Professional Staff List Report to the WDE. Districts provided the data by completing a questionnaire. Before releasing the data, WDE ensured that the data fields were complete. The main source of data quality issues is new questions on the questionnaire. In order to

allow for a period of familiarization with new questions, data from the first year of a new question, such as experience, are not reported.

The Professional Staff List Report contains information on the work assignments of all education professionals working in the state. Education professionals can have multiple assignments. For this report, individuals were counted as superintendents, principals, and assistant principals if they reported assignments to these jobs in any of their first 10 reported assignments.

A slightly different method was used for job designation for assignments prior to leadership roles. Individuals were assigned to one of 18 job categories based on where they spent the majority of their time. A table showing the relationship between WDE job categories and the job categories used in this report is located in Appendix C. One of the 18 job categories is the rather broad category of administration; further detail on activities by people placed in this category was derived from their first assignment.

There is some imprecision in these definitions. First, an individual may be designated as both a principal and a superintendent if he or she reported working in both jobs. Between 1993 and 2000 there were 18 instances of people serving as both principals and superintendents. There were eight instances of people working as both principals and assistant principals.

Finally, the WDE data include the individual school to which each principal is assigned, along with information about the location and size of the school. There are many schools in Wyoming that are not assigned a principal, since there are roughly 390 schools in Wyoming but only about 265 principals per year. It is most likely that these schools share principals or have some other type of supervisor. Schools that are not assigned principals are generally smaller schools. Table 1 shows the distribution of principals by school size quartile in 2000. In this particular year, there were 93 schools in each enrollment quartile. All schools in the largest quartile had principals (93), compared to only 15 percent (14) of the smallest schools.

Table 1: School Size and Number of Principals in 2000

	Number of Schools	Principal Count
School Quartile 1: Smallest	93	14
School Quartile 2	93	62
School Quartile 3	93	79
School Quartile 4: Largest	93	93

Source: WDE Professional Staff List Report & WDE Enrollment Data

DESCRIPTION OF WYOMING EDUCATION LEADERS

This section provides demographic information about education leaders working in Wyoming, beginning with principals.

WYOMING PRINCIPALS

Table 2 shows the number, average age, average salary, and proportion of female principals working in Wyoming.

Table 2: Demographics of Wyoming Principals, 1993 through 2000

Year	Number	Average Age	Average Salary	% Female
1993	264	46.4	\$ 49,341	16%
1994	269	46.5	\$ 50,014	17%
1995	271	46.9	\$ 50,735	20%
1996	263	47.4	\$ 51,138	21%
1997	266	47.2	\$ 52,274	21%
1998	271	47.5	\$ 54,822	22%
1999	262	47.8	\$ 56,124	26%
2000	260	48.1	\$ 57,437	31%

Source: WDE Professional Staff List Report

There were no clear trends from 1993 through 2000 in the number of principals, which fluctuated between 260 and 271. The average age of principals slowly and steadily increased from 46.4 to 48.1. As a comparison point, in 1993 the median age of secondary principals in Nebraska was between 41 and 45 and the median age of elementary principals was between 46 and 50 (Wendel et al., 1994). The increase in the age of principals from 46.4 to 48.1 was slightly less than the increase in the average age of teachers in the state, which moved from 41.6 to 43.6 over the same period (Reichardt, 2002). The average salary also increased during this period. Increases between 1993 and 1995 were relatively small, between .8 percent and 1.4 percent. The rate of increase was higher from 1996 to 1999, from 2.3 to 4.9 percent. The largest increase occurred between 1997 and 1998. The proportion of female principals essentially doubled from 16 to 31 percent.

To look at principal leadership by grade level, principals were assigned to grade groupings based on the grade level of the students they reported serving. Four non-exclusive grade groupings were created:

1. Elementary: kindergarten through sixth grades
2. Middle/junior high: sixth through ninth grades
3. High school: ninth through twelfth grades
4. All grades: kindergarten through twelfth grades

The proportion of principals working at each grade level remained fairly steady. About 50 percent worked in elementary schools; 24 percent, in high schools; 18 percent, in middle/junior high; and between five and 10 percent, in “all grades” schools. For further details see Appendix D.

Figure 3 shows the proportion of female principals by grade level. Between 1993 and 2000, high schools had the smallest proportion of females, between nine and 16 percent. The proportion of females at the other grade levels ranged from 17 to 39 percent. A general increase was observed at each of the grade levels in the proportion of female principals, with the largest increase, nearly 240 percent, in elementary principals. The smallest proportional increase from 1993 to 2000, about 150 percent, was observed for middle/junior high and all grades principals. The proportion of female principals working in all grades schools generally increased but was not very stable due to the small and often changing number of principals in this group.

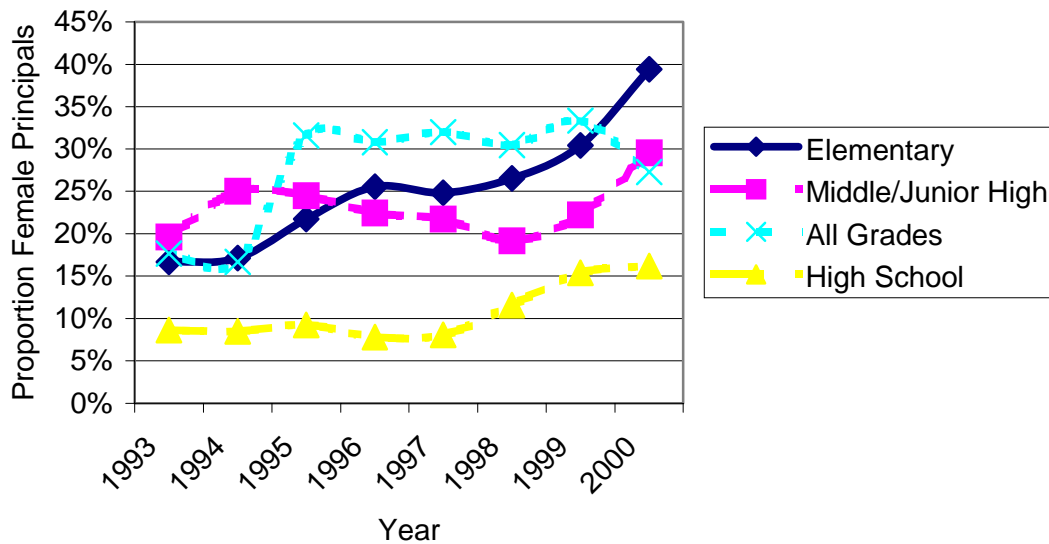


Figure 3: Female Principals by Grade Level

Source: WDE Professional Staff List Report

Table 3 shows the demographics of principals in 2000 by region within the state. In 2000, there were fairly equal numbers of principals in each region. The southeast had the most principals (57); the northeast had the fewest (44). Principals were slightly older in the southeast and younger in the northeast. Average salaries were highest in the central region of the state and lowest in the northwest.

Table 3: Wyoming Principals in 2000 by Region

	Number	Average Age	Average Salary	Percent Female
Northwest	52	48	\$54,575	29%
Northeast	44	46	\$56,329	25%
Southwest	56	48	\$57,155	23%
Southeast	57	50	\$58,853	37%
Central	51	48	\$60,038	41%

Source: WDE Professional Staff List Report

There is a larger variation in the proportion of females working as principals in the regions. Based on 2000 data, the central and southeast regions have relatively higher proportions of female principals, 41 and 37 percent, respectively. The southwest and northeast have relatively fewer female principals, 23 and 25 percent, respectively.

Another way to look at principal demographics is by school size, that is, enrollment served by the schools where the principal works. The same enrollment quartiles shown in Table 1 are used in Table 4. Instead of averages, medians are used because of the relatively small number of principals in the smallest schools, which makes averages less stable measures of characteristics¹.

Table 4: Wyoming Principals in 2000 by School Size

	Median Age	Median Salary	Percent Female	Principal Count
School Quartile 1: Smallest	49	\$51,962	29%	14
School Quartile 2	48	\$53,828	23%	62
School Quartile 3	49	\$56,052	39%	79
School Quartile 4: Largest	48	\$60,852	29%	93

Source: WDE Professional Staff List Report

The only clear pattern, when looking at principals by school size, is that principals in larger schools generally have higher salaries. There is no clear relationship between school size and principal age or proportion of female principals.

Examining principal characteristics by school locale is useful. Information on locale used for this report was compiled from the U.S. Census Bureau through WDE. As Manley (2000) points out, these local definitions do not always match the expectations of people in the field. Table 5 shows information on principals by locale in 2000. As Table 5 shows, based on 2000 data most Wyoming principals work in small towns. Those who work in cities or large towns generally receive higher salaries. As noted earlier, higher

¹ The median is the midpoint of a group of numbers. Half the values are above the median, and half are below.

salaries are also associated with larger schools, which make up a majority of the schools in cities and large towns.

Table 5: Wyoming Principals in 2000 by Locale

	Number	Age	Salary
City/Large Town	69	50	\$ 61,351
Small Town	103	47	\$ 57,949
Rural	88	48	\$ 53,770

Source: WDE Professional Staff List Report

Figure 4 shows changes in the proportion of female principals by locale. Cities and large towns have seen the largest growth in female principals; between 1993 and 2000, there was a four-fold increase, from 11 to 43 percent. The proportion of female principals in small towns doubled over the same period from 16 to 32 percent. At the same time, growth in the number of female principals in rural schools was relatively small, increasing from 17 to 20 percent.

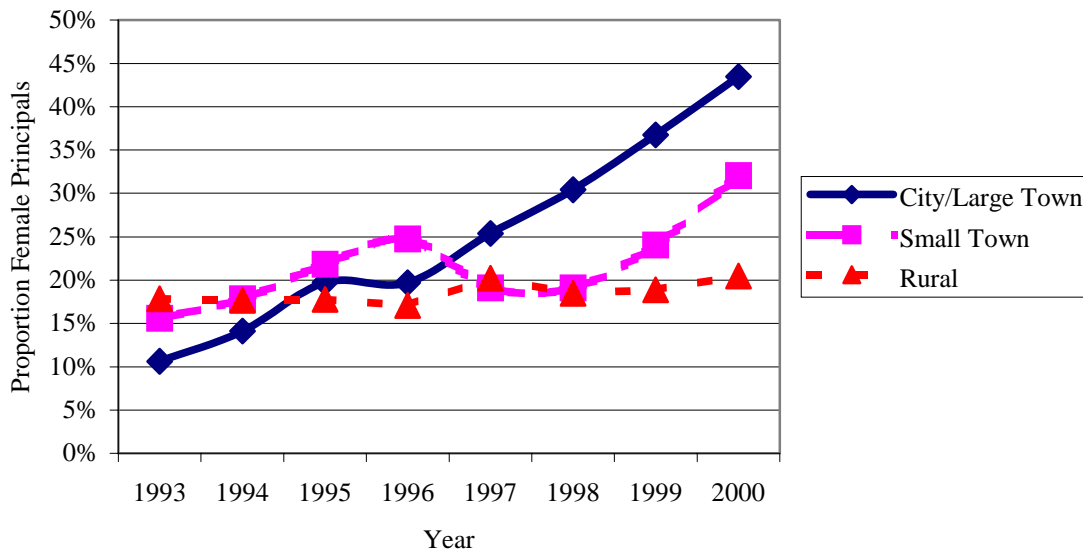


Figure 4: Female Principals by Locale

Source: WDE Professional Staff List Report

WYOMING SUPERINTENDENTS

Table 6 provides demographic information on superintendents. Because the number of superintendents is relatively small, all of the summary data presented here are medians instead of averages.

Table 6: Demographics of Wyoming Superintendents, 1993 through 2000

Year	Number	Median Age	Median Salary	% Female
1993	49	52	\$63,000	0%
1994	49	54	\$63,000	2%
1995	49	53	\$64,200	6%
1996	50	51	\$63,518	4%
1997	48	52	\$65,786	2%
1998	48	53	\$68,577	4%
1999	50	53	\$70,650	4%
2000	48	53	\$72,250	8%

Source: WDE Professional Staff List Report

The number of superintendents has been relatively stable, between 48 and 50, reflecting little district consolidation activity during this period. The median age also has been relatively stable, remaining at 53 for the last three years. As has been observed about principals, superintendents' salaries generally increased between 1993 and 2000; the largest increase occurred between 1997 and 1998. Superintendents' salaries were essentially flat between 1993 and 1996; larger increases occurred in subsequent years. The proportion of females grew, from zero in 1993 to eight percent in 2000.

Table 7 shows demographic information about superintendents in 2000 by region (the same regions used for principals). The northwestern part of the state, where the majority of the female superintendents work, has the most superintendents (18) and the lowest median salary (\$69,308). The southwestern region ranks second in terms of the number of superintendents (10). The central region is interesting in that the few superintendents who work there (5) are generally younger, with a median age of 43. The median ages in the other regions are between 54 and 56. Historically the median age in the central region has been lower than other regions, but not to this degree (see Appendix E). The southeast has the highest median salary, \$81,666.

Table 7: Wyoming Superintendents in 2000 by Region

	Number	Median Age	Median Salary	Percent Female
Northwest	18	54	\$ 69,308	17%
Northeast	8	56	\$ 74,206	0%
Southwest	10	54	\$ 74,022	10%
Southeast	7	54	\$ 81,666	0%
Central	5	43	\$ 74,188	0%

Source: WDE Professional Staff List Report

Districts were grouped into quartiles by enrollment, as were schools, as a way to glean further insights into their characteristics. Each quartile includes 12 districts. Table 8 shows demographic information on superintendents by district enrollment. No clear

relationship between age and district enrollment is evident. Superintendents in larger districts receive higher salaries; the median salary in the largest 12 districts is about \$20,000 higher than salaries in the smallest 12 districts. Female superintendents are concentrated in smaller districts.

Table 8: Wyoming Superintendents in 2000 by District Enrollment

	Median Enrollment	Median Age	Median Salary	Percent Female
District Quartile 1: Smallest	273	57	\$65,500	17%
District Quartile 2	744	49	\$69,808	17%
District Quartile 3	1,413	54	\$74,206	0%
District Quartile 4: Largest	3,233	55	\$84,750	0%

Source: WDE Professional Staff List Report & WDE Enrollment Data

Table 9: Wyoming Superintendents in 2000 by Locale

	Number	Age	Salary	Percent Female
City/Large Town	3			
Small Town	18	54	\$79,350	0
Rural	27	53	\$68,483	15%

Source: WDE Professional Staff List Report

Districts can also be classified by locale, as seen in Table 9. Only three districts fall into the category of city or large town, and the demographic information on these superintendents has not been shown to protect their privacy. Patterns observed about locale are very similar to those related to district size. Salaries do increase as districts become more urban. There is not an observable pattern between superintendents' ages and locale. All of Wyoming's female superintendents work in rural districts.

LEADER CERTIFICATION

Data provided by the Professional Teaching Standards Board (PTSB) include information on leader certification. These data cannot be disaggregated by locale or region. The PTSB provided data from 1996 to 2000 on the number of not fully certified educators by subject, including principals and superintendents. If one assumes that districts prefer fully certified leaders, then an increase in not fully certified leaders can indicate a shortage in supply.

The link between this indicator and education professional quality has not been clearly established by the limited research that is available. In fact, the link between certification and teacher quality is highly debated (Goldhaber & Brewer, 2001; Darling-Hammond, Berry, & Thoreson, 2001).

Table 10 shows data on not fully certified principals and superintendents. Not fully certified educators are defined as having a transitional, exception, or intern permit². Between 1996 and 2000, the proportion of not fully certified superintendents moved between two and six percent; no trend was observed.

Table 10: Number of Not Fully Certified Wyoming Education Leaders, 1996 through 2000

	Principals		Superintendents	
	Number	Percent	Number	Percent
1996	6	2%	2	4%
1997	9	3%	3	6%
1998	8	3%	2	4%
1999	6	2%	1	2%
2000	50	19%	3	6%

Source: Wyoming PTSB & WDE Professional Staff List Report

The proportion of not fully certified principals remained between two and three percent between 1996 and 1999, but jumped to 19 percent in 2000. This jump was most likely due to a doubling of the number of principals with transitional certification (from six to 13) and creation of the leadership intern program, which had 35 principal participants. The increase in interns is the product of a policy change (the creation of a new program) and is not a reliable indicator of qualification or supply issues. The increase in the number of principals with transitional certificates suggests that principal supply may be an issue that should be investigated further, but in and of itself does not indicate a supply issue.

PRINCIPAL DEMAND ISSUES

This section provides some basic information on principal demand. It begins with information about attrition from the state principal workforce and is followed by an analysis of transfers. Attrition in this case is defined as principals who do not work as principals in the state the next year. Those who move to other positions, such as superintendent, are counted as attrition from the principal workforce. The next demand issue is principal transfers, that is, principals who move from one district to another.

PRINCIPAL ATTRITION

Principal attrition is related to principals' age. Figure 5 shows the proportion of principals who left by age category from 1993 to 1999.

² For more information on types of certification, see the Administrators Handbook at <http://www.k12.wy.us/ptsb/index.html#rules>.

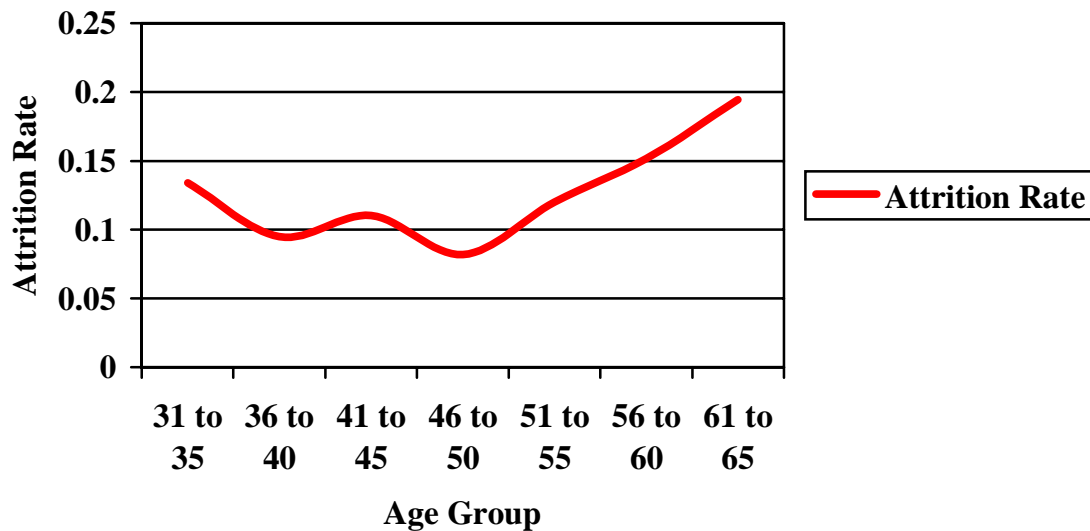


Figure 5: Average 1993 to 1999 Principal Attrition Rate by Age

Source: WDE Professional Staff List Report

During this time, younger principals had a slightly higher attrition rate, which leveled off during middle age. The rate then increased as more principals moved closer to retirement age. As Table 2 shows, the average age of Wyoming principals is increasing slowly, suggesting that there may be increased attrition if this trend continues.

Table 11 shows principal attrition rates by year and the proportion of the workforce that will be eligible to retire within five years. Retirement eligibility was calculated assuming principals can retire when they reach 60 or when the sum of their age and state experience equals 85. There is no retirement eligibility information for the years before 1997 due to a lack of experience data.

The attrition rate generally increased from between six and 10 percent in 1993 and 1994 to between 13 and 16 percent in 1998 and 1999. Equally important, the proportion of principals eligible to retire within five years has steadily increased to the point where a quarter of all principals can retire within five years of 2000. This suggests that Wyoming will face increasing demand for principals over the next few years as a large number of principals become eligible for retirement.

Table 11: Principal Attrition Rate and Eligibility to Retire by Year, 1993 through 2000

	Attrition Rate	Eligible to Retire within Five Years or Less
1993	6%	
1994	10%	
1995	10%	
1996	8%	
1997	12%	15%
1998	13%	18%
1999	16%	21%
2000		24%

Source: WDE Professional Staff List Report

In order to look at issues of attrition and retirement by school characteristics, the average attrition rate and proportion of principals eligible for retirement in five years or less were calculated for 1997 to 2000. Table 12 provides this information by school enrollment quartiles. Clearly, smaller schools have much higher attrition rates; almost double those of the largest schools. Smaller schools also have more principals eligible to retire within 5 years, which is clearly a factor in the higher attrition rates. These data indicate that demand is higher for principals in the smaller schools and that demand may increase due to higher retirement rates.

Table 12: Average 1997 to 2000 Principal Attrition and Eligibility to Retire by School Enrollment

	Attrition Rate	Able to Retire within Five Years or Less
Quartile 1: Smallest	25%	37%
Quartile 2	18%	14%
Quartile 3	11%	17%
Quartile 4: Largest	12%	22%
Total	14%	19%

Source: WDE Professional Staff List Report & WDE Enrollment Data

Larger schools may soon face higher retirement rates. Although recent attrition rates in these schools are low, they may soon increase faster than the middle two quartiles because of the higher proportion of retirement-eligible principals. Similar information on attrition and retirement eligibility by locale and region is contained in Appendix D.

PRINCIPAL TRANSFERS

The transfer of a leader out of one district to another district is a “quit” as far as the district that lost the leader is concerned. Thus, transfers can be considered a form of attrition. An examination of transfers may identify areas that have higher demand since

more leaders transfer from those districts. Conversely, districts that receive many transfers may have fewer supply issues than other districts due to their ability to use other districts as a source of supply.

Two types of transfers will be examined. The first type is the transfer of people who move to take their first job as a principal. This action means a loss of a potential leader in one district and the gain of a leader in another district. Within the data set there are 256 first-year principals. For 192 of these principals, there are data on the jobs they held before they became principals. About a third of the 192 principals with prior job data changed districts to take their new positions. These transfers will be called *new principal transfers*. The other type of transfer is of existing principals. Existing principal transfers are defined as the movement from one district to another of people who are already principals. Between 1994 and 2000 there were 41 principals who transferred districts.

The method for examining transfer patterns is to look at the net loss or gain of leaders between 1994 and 2000. An area that receives more leaders than it loses due to transfers has a net gain, which is shown as a positive number. An area that loses more leaders than it receives due to transfers has a net loss, which is shown as a negative number. Table 13 shows the net gain and loss of principals by locale.

Table 13: Net Gain or Loss of Principals Due to Transfers by Locale between 1994 & 2000

	City/ Large Town	Small Town	Rural
First-Year Principals	-2	-15	17
Existing Principals	5	5	-10

Source: WDE Professional Staff List Report

The row labeled “First-Year Principals” shows the net flow of people who changed districts to become principals between 1994 and 2000. Schools in cities or large towns had a net loss of two, and small towns had a net loss of 15, while rural schools gained 17 first-year principals from cities or towns. The flow of existing principals was in the opposite direction, out of rural schools to schools in cities in towns. Taken together, these data show that people move to rural areas to become principals and then principals move out of rural areas as they gain experience. As far as supply and demand are concerned, data about principal transfers between locales show that transfers increased supply pressures on small towns since these towns lost 10 more first-year principals than they gained from transfers of experienced principals.

Table 14 shows similar data by school enrollment category. These data are not surprising given the data shown above. Between 1994 and 2000, first-year principals transferred out of the largest schools to smaller schools. Remember that Table 1 shows that there are very few principals in the smallest quartile. Although the smallest schools receive fewer first-year principals than quartile 2 or 3 schools, this net transfer represents a larger proportion of the total number of first-year principals in the smallest schools.

Table 14: Net Gain or Loss of Principals Due to Transfers by Enrollment Category between 1994 & 2000

	Quartile 4: Largest	Quartile 3	Quartile 2	Quartile 1: Smallest
First-Year Principals	-18	7	8	3
Existing Principals	3	4	-3	-4

Source: WDE Professional Staff List Report & Enrollment Data

Although the smallest schools gain first-year principals, they lose experienced principals. On balance, the largest schools still lose more principals than they gain.

Table 15 shows similar data for transfers between regions. Here we see a general flow of principals out of the northeast and southwest into the northwest and southeast. The net flow out of the northeast and southwest is eight of first-year principals and another 10 existing principals. The net flow into the northwest and southeast is eight first-year principals and 12 existing principals. Transfers increase the supply pressure on the northeast and southwest and reduce the supply pressures on the northwest and southeast.

Table 15: Net Gain or Loss of Principals Due to Transfers by Region between 1994 & 2000

	Northwest	Northeast	Southwest	Southeast	Central
First-Year Principals	4	-6	-2	4	0
Existing Principals	4	-6	-4	8	-2

Source: WDE Professional Staff List Report

The final issue related to principals is the flow by grade level, which is shown in Table 16. Here the flow between grades is relatively small. High schools tend to have a net outflow, while elementary schools have a net inflow.

Table 16: Net Gain or Loss of Principals Due to Transfers by Grade Level between 1994 & 2000

	Elementary	Middle/Junior High	High School	All Grades
First-Year Principals	2	0	-2	0
Existing Principals	1	2	-1	-2

Source: WDE Professional Staff List Report

TRANSFERS AND COMPENSATION

A central question is, Do principals transfer for higher pay? Table 17 shows the median gain in daily rate (total salary divided by contract days) paid to principals who changed jobs and those who did not between 1996 and 1999 and the proportion whose daily rate

decreased. This table also provides similar information for changes in total salary. Clearly, many principals who transferred districts did not do so to increase their daily rate. About half experienced a loss in daily rate. Although more experienced a salary increase, salary decreased for a large number of principals. This suggests that immediate increases in compensation is not a driving factor for many principal transfers within Wyoming. Other incentives such as health or life insurance are not captured here and may be a factor in transfers. If compensation is not a driving issue in principal relocation, then factors such as working and living conditions may be more important to principals in deciding where to work.

Table 17: Change in Daily Rate and Salary for Principals Who Did and Did Not Transfer between 1996 & 1999

	Median Increase in Daily Rate	Proportion Whose Daily Rate Stayed the Same or Decreased	Median Total Salary Increase	Proportion Whose Salary Decreased	Number
Those Who Changed Districts	-\$0.64	48%	\$1,640	40%	41
Those Who Did Not Change Districts	\$9.57	6%	\$1,980	3%	915

Source: WDE Professional Staff List Report

Principal Demand Summary: The increasing attrition rates and proportion of principals nearing retirement suggest that the demand for Wyoming principals has and will continue to increase. The transfer data show that small, rural schools are serving as entry points for new principals. Experienced principals in these schools more often transfer to larger schools and to cities and towns. There are some schools whose supply is generally negative in terms of the flow of principal transfers. Schools in small towns appear to lose more principals than they gain. Schools in the northeast and southwest have an outflow of principals, which increases pressure on their supply. At the same time, schools in the northwest and southeast have a net inflow, which reduces the pressure on supply.

SOURCES OF PRINCIPALS

As was mentioned earlier in the section analyzing principals transfers, the data allow examination of the positions people held before they became principals. These data are available for about 75 percent of the new principals. Those without information in the system appear to not have worked as public education professionals inside the state. This suggests that about 25 percent of Wyoming’s principals either came from outside the state or worked in private schools in the state. As Table 18 shows, there is not a large difference between the characteristics of the principals who came from inside and outside of Wyoming public education in terms of age, first-year salary, and school size. These principals were about the same age, drew similar first-year salaries, and worked in schools of similar size. The only difference between these groups of principals is that principals from outside Wyoming tended to work in smaller districts. Information on the

locale and region where these different sources of principals worked can be found in Appendix F. The data in Appendix F show that principals from outside the Wyoming public education system worked less often in schools in cities or large towns, slightly less often in the central region, and slightly more often in the northwest.

Table 18: Characteristics of Principals Who Came from Inside and Outside of Wyoming Public Education between 1994 & 2000

	From Outside Wyoming Public Education	From Inside Wyoming Public Education
Average Age	45	44
Average First-Year Salary	\$ 49,601	\$ 49,658
Average School Enrollment	352	365
Average District Enrollment	2,694	4,771
Number	60	196

Source: WDE Professional Staff List Report & Enrollment Data

For those principals who came from within Wyoming public education, it is possible to look at sources of these principals, that is, the jobs these people held before they took principal positions. Table 19 shows the seven main sources of new principals from within Wyoming between 1994 and 2000. As expected, the largest source of new principals was assistant principals, and the third largest source of new principals was coordinators working outside of the classroom. This finding is consistent with the “traditional” career path from the classroom to an administrative job to the principal’s office. The main source of principals who moved directly from the teacher workforce was general education teachers (usually elementary school teachers), followed by special education teachers.

As shown in Table 20, the proportion of female principals between 1993 and 2000 was less than a third. A central question is whether there is an untapped supply of potential principals in the female teacher workforce. The third and fourth columns of Table 19 examine this issue. The third column of the table shows the proportion of new principals who were female from each source. For example, 58 percent of the new principals who worked as special education teachers were female. The fourth column shows the proportion of females who worked in each job. For example, the proportion of female special education teachers was 84 percent. The difference between the proportion of females hired into new principal jobs and the proportion of females who worked in the job the principals came from is shown in the fifth column. This is an indicator of whether females in this job were being tapped for leadership positions at the same rate as were males. If the proportion of females who were hired as principals were equal to the proportion of females working in that job, this difference would be zero. The difference for special education teachers was 26 percent, which means that the proportion of females hired from special education into principal jobs was 26 percentage points lower than the proportion of females who worked in special education. This negative difference suggests that there is room to grow in the proportion of females moving out of these jobs into principal positions.

Table 19: Main Sources of New Principals from Inside Wyoming Public Education between 1994 & 2000

	Proportion of New Principals	Percent Female of New Principals	Percent Female in Job	Difference in Proportion of Females Hired as Principals & Proportion of Females in this Job
Assistant Principals	34%	35%	27%	8%
General Education	21%	47%	82%	-35%
Coordinators	9%	18%	38%	-20%
Special Education	6%	58%	84%	-26%
Language Arts	5%	50%	71%	-21%
Physical Education	4%	0%	43%	-43%
Vocational & Driver's Education	4%	14%	45%	-31%

Source: WDE Professional Staff List Report

The largest difference between the proportion of females hired as principals and the proportion of females in each job was found for new principals who worked as physical education teachers. This was a relatively minor source of principals, supplying 4 percent of new principals between 1994 and 2000. All the new principals whose main job was physical education the year before they were selected were men, although only 57 percent of physical education teachers are men. The opposite situation occurred for principals selected from the assistant principal workforce, which was the primary source of new principals between 1994 and 2000. This was the one job where more females were hired as principals than worked in the job, as shown by the positive difference between the proportion of males hired as principals and males in the job of assistant principal.

Since assistant principals have been the main source of new principals, it is important to understand the flow of people into this job. There were 122 first-year assistant principals between 1994 and 2000. Of those, the data set contains records on 102, or just under 85 percent. This suggests that 15 percent of Wyoming assistant principals come from outside the Wyoming public education system. Table 20 is similar to Table 19, but provides information about assistant principals.

Table 20: Main Sources of New Assistant Principals from Inside Wyoming Public Education between 1994 & 2000

	Proportion of New Assistant Principals	Percent Female of New Assistant Principals	Percent Female in Job	Difference in Proportion of Females Hired as Assistant Principals & Proportion of Females in this Job
Principals	26%	11%	23%	-12%
General Education	15%	40%	82%	-42%
Math/Science	10%	0%	35%	-35%
Social Science	8%	12%	27%	-15%
Physical Education	8%	25%	43%	-18%
Vocational & Driver's Education	8%	12%	45%	-33%

Source: WDE Professional Staff List Report

The six jobs listed in Table 20 were the source of 75 percent of the assistant principals hired from within Wyoming between 1994 and 2000. Surprisingly, the main source of new assistant principals was people who previously worked as principals. Most principals who moved to assistant principal positions stayed in the same region and grade level. But there was a general flow into larger schools and out of rural areas. About 40 percent of principals who moved to become assistant principals moved to schools in the largest enrollment quartile. About 30 percent of those who moved out of principal positions moved out of rural schools to schools in towns or cities.

Consistent with the flow of teachers into principal positions, male teachers have been more likely to become assistant principals than female teachers. The largest difference, 42 percentage points, was found for assistant principals who worked in general education. Forty percent of new assistant principals from general education were female, compared to 82 percent of the general education workforce that was female. The smallest difference of 12 percentage points was found for principals who became assistant principals. These data indicate that once women become principals, they are less likely to move to assistant principal positions.

New principals are about as likely to coach during their prior year as any education professional. Table 21 shows the proportion of new principals who coached the year before they became principals and the proportion of education professionals who coached between 1994 and 2000. Coaching is defined as people who reported a coaching assignment in any of their first 10 assignments during a year. Table 21 shows that between 1994 and 2000, a quarter of all Wyoming education professionals coached, compared to 28 percent of people who moved into principal positions. A higher proportion of men worked as coaches than women, 43 percent compared to 16 percent.

Women who became principals were slightly more likely to have coached than all women working as education professionals, 20 percent compared to 16 percent. Men who became principals were less likely to have coached than men working as education professionals, 32 compared to 43 percent. These data do not support the concept that coaching is the road to the principal’s office for men or women. This may be because coaching data were only analyzed for the year prior to becoming a principal and do not take into account coaching several years prior to becoming a principal

Table 21: Proportion of New Principals who Coached the Prior Year and All Education Professionals Who Coached 1994 to 2000

	Female	Male	All
Year Prior to Principal	20%	32%	28%
All Education Professionals	16%	43%	25%

Source: WDE Professional Staff List Report

A central policy tool in principal supply is pay. Since principals and teachers work different numbers of days, their yearly salaries do not provide comparable rates of pay. A daily rate of pay provides a more comparable pay rate. The daily rate used here is total salary divided by contract days. The data used to make this calculation are only available after 1996. Using the daily rate does not account for differences in hourly rates that will occur if the number of hours in a contract day varies between teaching and administrative jobs.

Table 22 provides information for 1996 through 2000 on principals’ daily rates and the change in daily rates for people who moved into principal positions. The median daily rates are shown since the number of people moving into principal jobs is small, making averages (or means) less likely to reflect the experience of most people in the sample.

The first column in Table 22 shows the median daily rate for principals, which like the average salary shown in Table 2, had its largest increase between 1997 and 1998. The second column shows the daily rate for first-year principals with prior jobs in Wyoming public education. The daily rate for this group was between \$228 and \$249, with the last four years holding fairly steady at between \$241 and \$249. The daily rate of new principals is generally increasing, although the rate slightly decreased between 1999 and 2000. The third column shows the median daily rate for jobs held before people moved into principal positions. This rate was between \$210 and \$229, with a large jump of \$15 between 1997 and 1998. The fourth column shows the median change in daily rate experienced by people moving into principal positions. The change in daily rate was between \$11 and \$25 and appears to be decreasing. In other words, the increase in the rate of pay received as people move into principal positions is declining.

Table 22: Median Daily Rate for Principals and Daily Rate Change for People Moving into Principal Positions, 1996 through 2000

	Median Daily Rate for Principals	Median Daily Rate of First-Year Principals	Number of First-Year Principals	Median Daily Rate of Job Before Principal Job	Median Change in Daily Rate for Those Moving into Principal Job	Proportion Whose Daily Rate Decreased as They Moved into Principal Positions
1996	\$244	\$228	23	\$210	\$25	12%
1997	\$249	\$241	25	\$214	\$24	10%
1998	\$261	\$245	28	\$229	\$22	28%
1999	\$268	\$249	36	\$229	\$11	32%
2000	\$275	\$246	30			

Source: WDE Professional Staff List Report

Although the daily rate increased at the median level, not all people experienced a gain in their daily rate as they moved into principal positions. The fifth column of Table 22 shows the proportion of people whose daily rates decreased as they moved into principal positions. This proportion jumped after 1997 from 10 percent to 28 percent. It appears that in 1997 the daily rates of many positions increased, while the daily rates of first-year principals did not increase as much. This reduced the overall jump in the pay people generally received as they moved into principal positions and increased the number of people whose daily rates decreased as they became principals.

An examination of daily rates considers the amount of money people are paid for working a day. Another compensation issue central to the attractiveness of a job is total salary paid over a year. Table 23 presents information on salary changes in the same format used in Table 22 to present daily rate changes. Many of the patterns are similar. Interesting differences include a fluctuating median first-year principal salary and salary held before becoming principals.

Although the median change in salary generally became smaller in more recent years, it did not show the same linear decline observed for the change in daily rate. The proportion of those whose salaries decreased was smaller than the proportion whose daily rates decreased, and does not appear to be increasing with time.

Table 23: Median Salary for Principals and Salary Change for People Moving into Principal Positions, 1996 through 2000

	Median Salary	Median Salary of First-Year Principals	Median Salary of Job Before Principal Job	Median Change in Salary for Those Moving into Principal Job	Proportion Whose Salary Decreased as They Moved into Principal Positions
1996	\$50,600		\$42,166	\$9,425	4%
1997	\$51,503	\$49,965	\$42,150	\$6,000	7%
1998	\$54,358	\$50,520	\$44,842	\$6,570	10%
1999	\$55,475	\$48,749	\$43,742	\$7,626	0%
2000	\$56,875	\$51,000			

Source: WDE Professional Staff List Report

The analysis of daily rates and total salary takes two different looks at compensation. Taken together, analyses of the two different measures of compensation do not tell exactly the same story. Both make clear that not all people who take principal positions receive higher compensation. However, trends in decreases in compensation are not the same. Although the proportion of principals who take cuts in daily rates appears to be increasing, the proportion of principals who take cuts in total salary does not appear to be increasing.

Principal Supply Summary: An important source of new principals in Wyoming is people who are not part of the Wyoming public education system. About 25 percent of new principals and 15 percent of new assistant principals came from outside the system during the period analyzed. Presumably these people came from other states, private schools, or left the system before 1993. An analysis of the flow of people from within Wyoming's public education system into the principals' job between 1994 and 2000 shows that most people, 43 percent, took the traditional route through an administrative job as an assistant principal or coordinator. The flow between principal and assistant principal is not one-way. About a quarter of new assistant principals moved from principal positions.

Compensation and principals' positions are a complicated matter. The transfer data and the fact that some take a cut in compensation to take a principal position make it clear that higher immediate compensation is not a reward for many changes. Between 1996 and 2000, about five percent of new principals received lower overall salaries and about 20 percent took cuts in their daily rate. It is possible that other factors such as the prestige of the position and locations where people work are equally as important as pay to some principals. That said, what is not accounted for in this analysis is compensation over a person's career. It is possible that although people receive lower salaries during their first year as a principal, this reduction may be temporary. Principal positions may have the potential for higher compensation over the remainder of a career than remaining in teaching.

Men are more likely to move into principal positions than women. For all jobs that feed the principalship, with the exception of assistant principal jobs, a higher proportion of men become principals than work in that job. Once a woman gets an assistant principal position, she is more likely to move into the principal's office than male assistant principals. But women face lower probabilities in moving into the assistant principal's office than men. This suggests that increasing the flow of women into assistant principal and principal positions may be a way to increase the supply of principals as the demand for principals increases. This change may already be occurring. The number of females in University of Wyoming leadership training programs is slightly more than the number of males (see Appendix G).

SUPERINTENDENT DEMAND ISSUES

Table 24 reports the same information as does Table 11, but for superintendents instead of principals. Because there are so few superintendents in Wyoming, the rates are not very stable from year to year. Over multiple years, there are no clear trends. In other words, the superintendent attrition rate appears to be fairly stable at just under 20 percent.

The proportion of superintendents who are eligible to retire in the next five years appears to be stable at about 40 percent. Comparing these patterns with those observed for principals in Table 11 suggests that the demand for superintendents due to attrition is higher than for principals, yet not growing, while principal demand is growing. Nor is superintendent demand expected to grow in the near term due to retirements, as is principal demand.

Table 24: Superintendent Attrition Rate and Eligibility to Retire by Year, 1993 through 2000

	Attrition Rate	Able to Retire within Five Years or Less
1993	12%	
1994	20%	
1995	31%	
1996	22%	
1997	15%	38%
1998	8%	42%
1999	22%	38%
2000		42%

Source: WDE Professional Staff List Report

Table 25 shows the 1997–2000 attrition rates and proportion of superintendents who were eligible for retirement by district enrollment quartile. The relationship between principal attrition and enrollment, as shown in Table 13, is fairly clear; attrition increases as school enrollment decreases. For superintendents this relationship generally holds, but is not as linear. For 1997 through 2000, the attrition rate for the smaller two quartiles of districts, with enrollments between 100 and 900, was higher than attrition noted for larger districts.

Table 25: Average 1997 to 2000 Superintendent Attrition and Eligibility to Retire by District Enrollment

	Attrition Rate	Able to Retire within Five Years or Less
Quartile 1: Smallest	16%	54%
Quartile 2	25%	27%
Quartile 3	8%	33%
Quartile 4: Largest	11%	44%
Total	15%	40%

Source: WDE Professional Staff List Report & WDE Enrollment Data

With principals there was also a relationship between eligibility for retirement and enrollment. This relationship is not present for superintendents, suggesting that although smaller districts may have faced higher demand for superintendents in the past, this trend may not continue into the future. Similar data by region can be found in Appendix E.

Superintendent transfers can be examined in the same fashion as principal transfers. Tables 26 and 27 show transfers by enrollment category and locale, respectively. Data about transfers by region can be found in Appendix E. The patterns for principal transfers by enrollment category are very similar to patterns for superintendents. First-year superintendents move out of larger districts and into smaller districts to begin their career. Experienced superintendents move in the opposite direction, but in smaller numbers and not to the largest district. As a result, smaller districts gain more superintendents than they lose.

Table 26: Net Gain or Loss of Superintendents Due to Transfers by Enrollment Category between 1994 & 2000

	Quartile 4: Largest	Quartile 3	Quartile 2	Quartile 1: Smallest
First-Year Superintendents	-7	-3	2	8
Existing Superintendents	0	2	3	-5

Source: WDE Professional Staff List Report & Enrollment Data

A very similar pattern is seen with transfers by locale. First-year superintendents transfer out of cities and towns into rural districts to take their new positions. Experienced superintendents flow out of rural areas to towns and cities. The overall flow is a gain to rural areas.

Table 27: Net Gain or Loss of Superintendents due to Transfers by Locale between 1994 & 2000

	City/Large Town	Small Town	Rural
First-Year Superintendents	-2	-8	10
Existing Superintendents	1	2	3

Source: WDE Professional Staff List Report

As was noted about principals, some education professionals move out of larger, more urban districts to take positions as superintendents in smaller, more rural districts. A few experienced superintendents move out of the smaller, more rural districts into the larger, more urban districts. The smaller, rural districts serve as a type of training ground for education leaders.

Table 28 shows the change in salary and daily rate for those superintendents who changed districts compared to those who did not. Data are available for only seven superintendents who changed districts. A majority of those seven did not gain in salary or daily rate when they changed districts. At the same time many superintendents did not see increases in their daily rate (11 percent) or total salary (25 percent). This suggests that an increase in salary or daily rate was not a prime factor for many superintendent transfers.

Table 28: Change in Daily Rate and Salary for Superintendents Who Did and Did Not Transfer between 1996 & 1999

	Median Daily Rate Change	Proportion Whose Daily Rate Stayed the Same or Decreased	Median Salary Change	Proportion Whose Salary Stayed the Same or Decreased	Number
Those Who Changed Districts	-\$5.19	57%	-\$3,432	57%	7
Those Who Did Not Change Districts	\$8.21	8%	\$2,100	1%	169

Source: WDE Professional Staff List Report

Superintendent Demand Summary: The attrition rate of superintendents fluctuated greatly from year to year, but did not show a general increase, nor did eligibility for retirement increase. This suggests that the demand for superintendents will not increase as is expected for principals. Smaller districts face higher attrition rates. Transfer data for superintendents show similar trends as do data analyzed for principals. A general flow of

new superintendents to smaller or rural schools was found; experienced superintendents moved to larger more urban schools. Some of the transfers of experienced superintendents resulted in immediate decreases in salary or daily rate, suggesting, as was found with principals, that an immediate gain in salary was not a primary reason for these transfers.

SUPERINTENDENT SOURCES OF SUPPLY

Between 1994 and 2000, 60 superintendents were new to the job in Wyoming. Thirty-five had worked in other positions within Wyoming public education, while 25, or about 40 percent, came from outside Wyoming public education. The relative characteristics of these two groups are shown in Table 29.

Table 29: Characteristics of Superintendents Who Came from Inside and Outside of Wyoming Public Education between 1994 & 2000

	From Outside Wyoming Public Education	From Inside Wyoming Public Education
Median Age	52	48
Median First-Year Salary	\$ 68,000	\$ 61,500
Median District Enrollment	920	763
Number	25	35

Source: WDE Professional Staff List Report & Enrollment Data

Although there was little difference between principals from inside and outside Wyoming public education, there were some differences between superintendents. Those from outside Wyoming public education were a bit older, received higher median salaries, and worked in larger districts. Information on differences in locales and regions where first-year superintendents worked by source is located in Appendix F. Generally, those from outside Wyoming public education worked slightly more often in cities and large towns with no differences by region.

Table 30 provides comparable data for superintendents as those shown for principals in Table 20, reflecting the main jobs held by the 35 education professionals who worked in Wyoming before they became principals. The majority (60 percent) moved from the principal's office to the superintendency. As was found relative to principals, females fared better in becoming superintendents if they went through the assistant's position. However, among superintendents, former assistants constitute a much smaller proportion of new superintendents (11 percent) compared to (34 percent) of principals. As discussed, females have a low probability of becoming principals. This table shows that female principals also have a low probability of moving into superintendent positions.

Table 30: Main Sources of New Superintendents from Inside Wyoming Public Education between 1994 & 2000

	Proportion of New Superintendents	Percent Female of New Superintendents from This Job	Proportion of Females in This Job	Difference in Proportion of Females Hired as Superintendents & Proportion of Females in This Job
Principal	57%	0%	22%	-22
Curriculum Coordinators or Directors	31%	36%	38%	2
Assistant Superintendent	11%	25%	13%	12

Source: WDE Professional Staff List Report

The change in median daily rate as people move into superintendent positions is shown in Table 31, just as it is shown for principals in Table 22. The median daily pay rate increased at a fairly steady pace throughout the period. The median daily rate for superintendents from 1996–2000 was about \$20 higher than principals’ median daily rate across this same period.

There were only 13 new superintendents from Wyoming public education between 1996 and 2000. This small group results in descriptive statistics that are rather unstable. The median daily rate of first-year superintendents and of jobs prior to becoming superintendents fluctuated year by year. As was found with transitions to principal positions, not all moves resulted in increased daily rates. About a third resulted in lower daily rates. Trends in the daily rate change and in the proportion of new superintendents whose daily rates decreased are difficult to identify due to the small number of new superintendents.

Table 31: Median Daily Pay Rate for Superintendents and Daily Rate Change for People Moving into Superintendent Positions

	Median Daily Rate for Supt.	Median Daily Rate of First-Year Supt.	Number of First-Supt. from WY	Median Daily Rate of Job Before Supt. Job	Median Change in Daily Rate for Those Moving into Supt. Positions	Proportion Whose Daily Rate Decreased as They Moved into Supt. Positions
1996	\$261			\$226	\$16	50%
1997	\$273	\$280	4	\$239	\$28	0%
1998	\$280	\$250	3	\$295	-\$17	50%
1999	\$288	\$291	2	\$287	\$15	25%
2000	\$299	\$265	4			
1996–2000	\$278	\$264	13	\$256	\$17	31%

Source: WDE Professional Staff List Report

The total salary data for people moving into superintendent positions are similar to the daily rate data. Generally, total salaries increased as people took these new position. However, few new superintendents in 1999 and 2000 did see their overall salaries decrease as they took their new positions.

Table 32: Median Salary for Superintendents and Change in Salary for People Moving into Superintendent Positions

	Median Salary	Median Salary of First-Year Supt.	Median Salary Prior to Becoming a Supt.	Median Change in Salary when Moving into Supt. Positions	Proportion Whose Salary Decreased when Becoming Supt.
1996	\$ 65,386	\$ 60,575	\$ 50,900	\$ 10,100	0
1997	\$ 67,577	\$ 68,000	\$ 52,600	\$ 9,500	0
1998	\$ 70,304	\$ 64,000	\$ 71,606	\$ 894	50%
1999	\$ 72,326	\$ 71,000	\$ 62,815	\$ 9,685	25%
2000	\$ 74,514	\$ 67,500			
1996–2000	\$ 68,492	\$ 65,000	\$ 57,039	\$ 8,688	15%

Source: WDE Professional Staff List Report

Superintendent Supply Summary: A significant source of superintendent supply in Wyoming is from outside the Wyoming public education system. About 40 percent of new superintendents come from outside the Wyoming system. Superintendents from outside the system receive higher salaries and tend to work in larger districts. The main source of supply for superintendents from inside the Wyoming public education system is principals. The main source of female superintendents is assistant superintendent positions. New superintendents from within Wyoming often, but not always, receive increases in pay as they take their new positions. The proportion that does not receive

increases in daily rates does not appear to be increasing, although the proportion that took cuts in total salary was higher in 1998 and 1999 than in 1997 and 1998.

CONCLUSIONS AND DISCUSSION

This report provides information on the Wyoming school and district leadership workforce including trends in attrition, retirement, and sources of supply. The increase in principals who will soon be eligible for retirements suggests that the demand for new principals will increase. The demand for superintendents does not show similar trends.

Almost all education leaders come from inside the education workforce, but not all come from within the state's education workforce. Wyoming appears to be able to attract significant numbers of leaders from outside the state's education workforce; 15 percent of assistant principals, 25 percent of principals, and 40 percent of superintendents come from outside Wyoming's public education system. When recruiting from inside the education system, many leaders come through traditional routes from classrooms, through administrative positions, into principal positions, and then into superintendent positions.

Women appear to be a source of education leaders that is not completely tapped. The proportion of female principals has increased significantly; the largest increases have occurred in elementary grades and in cities and large towns. The proportion of female superintendents has also grown; the largest growth has occurred in smaller and rural districts. Despite this growth in female leadership in Wyoming, the proportion of women working in teaching jobs is much higher than the proportion of females hired into leadership positions. Effectively moving more females from classrooms into leadership positions may be the easiest way to increase the supply of qualified leaders.

This change may be occurring. The number of females in training for leadership positions is slightly higher than the number of males. The University of Wyoming reports that just over half (51%) of students in the university's 2001 Educational Leadership program are females (see Appendix G). This suggests that the pool of qualified females prepared for leadership positions is, or may soon be, as large as the pool of qualified male applicants.

Efforts to increase the supply of female leaders may be informed by the experiences of existing female leaders. These efforts should focus on the factors that affect women's decisions and transition points that steered them from the classroom into administration. Armed with this knowledge, policymakers will be better able to craft effective policies and programs to increase the supply of Wyoming leaders.

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**APPENDIX A: CROSSWALK BETWEEN DISTRICTS, REGIONS,
LOCALES, AND ENROLLMENT QUANTILES
(IN 2000)**

District	District Number	Locale	Region	Enrollment (2000) Quartile
		City/Large		
Albany Co School Dist 01	101	Town	SE	4
Big Horn Co School Dist 01	201	Rural	NW	2
Big Horn Co School Dist 02	202	Rural	NW	2
Big Horn Co School Dist 03	203	Rural	NW	2
Big Horn Co School Dist 04	204	Rural	NW	1
Campbell Co School Dist 01	301	Small Town	NE	4
Carbon Co School Dist 01	401	Small Town	Cen.	3
Carbon Co School Dist 02	402	Rural	Cen.	2
Converse Co School Dist 01	501	Small Town	Cen.	3
Converse Co School Dist 02	502	Rural	Cen.	2
Crook Co School Dist 01	601	Rural	NE	3
Fremont Co School Dist 01	701	Small Town	NW	3
Fremont Co School Dist 02	702	Rural	NW	1
Fremont Co School Dist 06	706	Rural	NW	1
Fremont Co School Dist 14	714	Rural	NW	2
Fremont Co School Dist 21	721	Rural	NW	1
Fremont Co School Dist 24	724	Rural	NW	1
Fremont Co School Dist 25	725	Small Town	NW	4
Fremont Co School Dist 38	738	Rural	NW	1
Goshen Co School Dist 01	801	Small Town	SE	3
Hot Springs Co Sch Dist 01	901	Small Town	NW	2
Johnson Co School Dist 01	1001	Small Town	NE	3
		City/Large		
Laramie Co School Dist 01	1101	Town	SE	4
Laramie Co School Dist 02	1102	Rural	SE	3
Lincoln Co School Dist 01	1201	Small Town	SW	2
Lincoln Co School Dist 02	1202	Rural	SW	4
		City/Large		
Natrona Co School Dist 01	1301	Town	Cen.	4
Niobrara Co School Dist 01	1401	Rural	SE	1
Park Co School District 01	1501	Small Town	NW	3
Park Co School District 06	1506	Small Town	NW	4
Park Co School District 16	1516	Rural	NW	1
Platte Co School Dist 01	1601	Small Town	SE	3
Platte Co School Dist 02	1602	Rural	SE	1
Sheridan Co School Dist 01	1701	Rural	NE	3
Sheridan Co School Dist 02	1702	Small Town	NE	4
Sheridan Co School Dist 03	1703	Rural	NE	1
Sublette Co School Dist 01	1801	Rural	SW	2

District	District Number	Locale	Region	Enrollment (2000) Quartile
Sublette Co School Dist 09	1809	Rural	SW	2
Sweetwater Co Sch Dist 01	1901	Small Town	SW	4
Sweetwater Co Sch Dist 02	1902	Small Town	SW	4
Teton Co School Dist 01	2001	Small Town	SW	4
Uinta Co School Dist 01	2101	Small Town	SW	4
Uinta Co School Dist 04	2104	Rural	SW	2
Uinta Co School Dist 06	2106	Rural	SW	2
Washakie Co School Dist 01	2201	Small Town	NW	3
Washakie Co School Dist 02	2202	Rural	NW	1
Weston Co School Dist 01	2301	Small Town	NE	3
Weston Co School Dist 07	2307	Rural	NE	1

APPENDIX B: ENROLLMENT AND POPULATION PROJECTIONS BY LOCALE

Enrollment by Locale

	1993	1994	1995	1996	1997	1998	1999	2000
Small Towns	51,507	51,052	50,817	50,284	48,965	47,870	46,206	44,813
City/Large Towns	31,507	31,197	31,052	30,830	30,216	29,731	29,282	29,093
Rural	17,846	18,032	17,957	17,634	17,323	16,819	16,395	15,645

Source: WDE Enrollment Data

School-Age Population Projections by Locale

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Small Town	62,823	62,008	61,192	60,276	59,360	58,449	57,538	56,980	56,421
City/Large Town	36,879	36,451	36,023	35,653	35,282	34,850	34,417	34,057	33,697
Rural	9,315	9,145	8,974	8,894	8,814	8,744	8,673	8,607	8,540

Source: Wyoming Department of Administration: <http://eadiv.state.wy.us/pop/pop.htm>

APPENDIX C: CROSSWALK BETWEEN ANALYSIS JOB TYPES AND WDE ASSIGNMENTS

Job Type	Parent Type (From WDE)	Additional Assignments in this Job Type	
Language Arts	G Language Arts		
Math & Science	H Mathematics		
	I Science		
	IA Life Science		
	IB Physical Science		
Social Sciences	J Social Studies/Sciences		
	JA Geography		
	JB History		
PE	K Physical Education and Health		
Humanities	MA Art		
	MB Music		
	MC Drama and Theater		
Vocational & Driver's Ed.	NA Agriculture		
	NB Marketing		
	NC Family and Consumer Science		
	ND Trade and Industry		
	NE Health Occupations		
	NF Business		
	NG Technology Education		
	X Other	DRE	Driver Education
Coaching	KB Coaching		
	X Other	ADV	Advisor/Sponsor Any Club Activity - Not Coaching
Foreign Language	L Foreign Language		
Computer	X Other	CPL	Computer Literacy/Lab
	X Other	COM	Computer/Tech Coordinator
	X Other	CPS	Computer Science
Student Services	BA Guidance Counselors		
	BB Library Media Staff		
	BD Student Support Staff -- Professional		
Special Education	OA Special Education		
	OC Gifted & Talented		

Job Type	Parent Type (From WDE)	Additional Assignments in this Job Type	
Remediation	OB	Remediation	
	AA	Teacher	
General Education	F	General/Multidisciplinary	
Other Admin	BF	Coordinators and Supervisors	
School Staff	CH	Food Service Staff	
	CN	Other Staff	
Central office	CC	Central Office Administrators	
School Building Admin	CA	School Building Administrators	
Collaborative	X	Other	COL Collaboration (PTSB Approved)

APPENDIX D: PRINCIPALS

Principals by Reported Grade Level, 1993 through 2000

	1993	1994	1995	1996	1997	1998	1999	2000
Elementary	141	143	139	137	135	133	125	138
Middle/Junior High	51	52	49	49	46	47	45	44
High School	58	59	65	64	62	69	65	68
All Grades	14	15	18	13	23	22	27	10
Total	264	269	271	263	266	271	262	260

Source: WDE Professional Staff List Report

Principal Attrition and Retirement Eligibility Between 1996 and 2000

	Attrition Rate	Able to Retire within Five Years or Less
Northwest	14%	20%
Northeast	15%	17%
Southwest	15%	20%
Southeast	12%	23%
Central	12%	17%
Average	14%	20%

Source: WDE Professional Staff List Report

Principal Attrition and Retirement Eligibility Between 1996 and 2000

	Attrition Rate	Able to Retire within Five Years or Less
City/Large Town	10%	20%
Small Town	15%	19%
Rural	15%	20%

Source: WDE Professional Staff List Report

APPENDIX E: SUPERINTENDENTS

Median Age of Principals by Region, 1993 through 2000

	Northwest	Northeast	Southwest	Southeast	Central
1993	51	52	55	53	48
1994	56	52	55	55	49
1995	53	53	49	56	50
1996	53	54	50	53	50
1997	53	54	51	54	51
1998	53	54	52	55	50
1999	54	55	53	53	50
2000	54	56	54	54	43

Source: WDE Professional Staff List Report

Superintendent Attrition and Retirement Eligibility Between 1996 and 2000

	Attrition Rate	Able to Retire within Five Years or Less
Northwest	20%	45%
Northeast	8%	53%
Southwest	10%	30%
Southeast	10%	46%
Central	27%	10%
Average	15%	40%

Source: WDE Professional Staff List Report

Superintendent Attrition and Retirement Eligibility Between 1996 and 2000

	Attrition Rate	Able to Retire within Five Years or Less
City/Large Town	11%	50%
Small Town	11%	35%
Rural	18%	42%

Source: WDE Professional Staff List Report

Net Gain and Loss of Superintendents Due to Transfers Between 1994 & 2000 by Region

	Northwest	Northeast	Southwest	Southeast	Central
First-Year Principals	5	-2	0	-1	-2
Existing Principals	-5	1	3	0	1

Source: WDE Professional Staff List Report

**APPENDIX F: WHERE PRINCIPALS & SUPERINTENDENTS
WORKED WHO CAME FROM INSIDE AND
OUTSIDE WYOMING PUBLIC EDUCATION
1994 THROUGH 2000**

Sources of Principals and Where They Worked by Region

	From Outside Wyoming Public Education	From Inside Wyoming Public Education
Northwest	25%	20%
Northeast	17%	18%
Southwest	27%	22%
Southeast	18%	18%
Central	13%	21%

Source: WDE Professional Staff List Report

Sources of Principals and Where They Worked by Locale

	From Outside Wyoming Public Education	From Inside Wyoming Public Education
City/Large Town	7%	26%
Small Town	48%	35%
Rural	45%	39%

Source: WDE Professional Staff List Report

Sources of Superintendents and Where They Worked by Region

	From Outside Wyoming Public Education	From Inside Wyoming Public Education
Northwest	52%	49%
Northeast	12%	9%
Southwest	16%	23%
Southeast	8%	11%
Central	12%	9%

Source: WDE Professional Staff List Report

Sources of Principals and Where They Worked by Locale

	From Outside Wyoming Public Education	From Inside Wyoming Public Education
City/Large Town	8%	9%
Small Town	24%	34%
Rural	68%	57%

Source: WDE Professional Staff List Report

**APPENDIX G: 2001 PARTICIPANTS IN UNIVERSITY OF
WYOMING LEADERSHIP TRAINING PROGRAMS
BY SEX**

2001 Participants in University of Wyoming Leadership Training Programs by Sex

	Principal Endorsement Program	Principal Preparation Program	Doctoral Program	Total
Male	16	23	22	61
Female	23	28	12	63

Source: Personal correspondence with University of Wyoming School of Education