

Relative Teacher Compensation in Nevada

2013

This report examines available data on the relative compensation of public school teachers in Nevada.

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FORWARD

Nothing is more important to the educational success of Nevada's students than effective teachers. If all of our half million K-12 school enrollees had effective teachers throughout their elementary schooling, we would not have an achievement gap between middle class and poverty impacted students, and Nevada students would rank with Finland as the highest achieving students in the world.

But how can Nevada ever construct such a cadre of effective teachers, a teacher corps that knows how to teach reading and mathematics, utilize modern instructional techniques and technology, tailor teaching to the needs of students, engage productively with parents, and on and on across the spectrum of complicated activities that comprise the workday life of a professional teacher? Even if daunting, this is not a rhetorical question.

The answer can unlock a marvelous educational future for Nevada's children. Teachers, like all humans, are motivated by many forces and circumstances. Some see teaching as a missionary-like calling. Others think of it as a professional career. Yet others see it as a job. A few probably see it as an easy path to a comfortable middle class life. Regardless of all the complexities involved, virtually all teachers and prospective teachers are at least moderately concerned with the compensation.

Getting teacher pay "right" may not solve all our schooling problems, but it would be a huge step forward. But getting teacher pay "right" is a challenge in itself. How much should teachers be paid? How much is needed to comprise an effective inducement for added numbers of talented individuals to become teachers? How high a salary is needed to retain able teachers in the profession? There exists dozens of related questions.

The path to pursuing answers starts with knowledge of today's teacher's salaries and other financial compensation. Therein resides the utility of this occasional paper. Professor Podgursky lays the foundation here for a range of subsequent economic questions dealing with our human capital in education. There is more we need to know, but this paper is an important, objective, and factual beginning upon which additional economic analyses can be based and around which policy debates can be framed.

Nevada spends approximately \$1.7 billion annually upon educator compensation. It is the largest single item of expenditure in the public sector. It is an amount that justifies careful and continual scrutiny. Catamount Fund, Ltd. does Nevada a favor by commissioning this study and Professor Podgursky furthers the favor by bringing world-class scholarship to bear on the topic.

James W. Guthrie
Superintendent of Public Instruction
State of Nevada

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Relative Teacher Compensation in Nevada

Executive Summary

This report examines available data on the relative compensation of public school teachers in Nevada.

- Average base pay for a full-time school teacher in Nevada during school year 2011-12 was \$55,005.
- In 2011-12 Nevada ranked 18th nationally in the most widely cited comparison of average teacher salaries. With respect to border states, Nevada ranked below California and Oregon, but above Arizona, Idaho, and Utah.
- Over the past decade teacher employment has grown faster in Nevada than surrounding states, particularly California and Oregon, where employment is falling or stagnant. Since nearly all new teachers enter at the lowest steps of salary schedules, this means that simple comparisons of average pay will tend to understate salary growth in Nevada compared to surrounding states.
- Pay of college educated non-teachers is higher in Nevada as compared to all surrounding states except California.
- Examination of available experience adjusted starting and senior pay for Nevada is inconclusive.
- Nevada ranks just below Oregon and Utah in fringe benefits as a percent of salaries for instructional personnel.

In sum, available data suggest that Nevada pay and benefits for teachers are not out of line with surrounding states, particularly when consideration is given to the rapid rate of hiring of new teachers in Nevada. However, effort should be made to collect better data on experience-adjusted teacher compensation in Nevada and surrounding states to support more reliable comparisons.

Relative Teacher Compensation in Nevada

Economic theory predicts, and much data support, the proposition that the relative pay plays an important role in attracting and retaining employees in a particular occupation or labor market. While non-pecuniary factors certainly play a significant role in the decision to become or remain a teacher, research shows that teacher turnover and mobility are affected by measures of relative pay. Thus, it is of interest to know how a district or state stands in relation to other districts or states with regard to educator compensation.

In this report we draw together the best available published and unpublished data to address two questions concerning the relative compensation of Nevada teachers.

- How do teacher salaries compare across districts in Nevada?
- How do teacher salaries and benefits in Nevada compare to those in other states – particularly bordering states?

2011-12 Nevada Teacher Pay

The Nevada Department of Education maintains a database with the base salaries of all teachers in Nevada. In the teaching profession “base salary” usually means the remuneration determined by the salary schedule for standard duties by a professional teacher. It does not include compensation for additional duties such as athletic coaching, club sponsorship, band direction, and so on. Nor does it include pay for teaching during the summer. In Nevada districts the typical contract year for teachers is about 185 days.¹

Figure 1 reports data on salaries of full-time teachers by district. Two salary measures are reported: the average and median. The former is the simple unweighted average of teacher salaries. The median is the midpoint value of salaries ranked from low to high, with equal percentages (roughly 50 percent) of teachers above and below the median value. (Independent charter schools are treated as a single district.) The median salary ranges from a high of \$78,787 in the Eureka district to \$49,351 in the Mineral district. No adjustments are made for differences in living costs between these districts. Average and median salaries and employment of full time teachers by district in 2011-12 are reported in Appendix Table 1.

A comparison of average or median salaries across districts (or states), while informative, may not accurately reflect differences in pay of individual teachers over a career. Teacher pay in Nevada school districts is largely determined by salary schedules which set base pay by teacher seniority and

¹ The Clark county teacher collective bargaining agreement sets the work year at 184 days and the Washoe country agreement specifies 185-187 depending on whether the school operates on a traditional or year-round schedule. These two districts account for 82 percent of full time public school teacher employment in Nevada. For comparison, data from the U.S. Department of Education show that the average worker in a medium to large private establishment with 20 years of seniority gets 20.3 days of paid vacation and 9.3 days of paid holidays annually. This means that a comparable work year in a medium to large private firm would be 230 days. (Bureau of Labor Statistics. Employee Benefit Survey. <http://data.bls.gov/pdq/querytool.jsp?survey=eb>)

educational credentials, which in practice are also a function of seniority. Thus, even if the salary schedules of two districts were identical, average pay would differ if the average experience of the teachers in the districts differed.²

A related problem in comparing salaries between districts arises because of the small numbers of teachers in some districts. The distribution of teacher employment in Nevada is highly skewed. For example, the size distribution of full time teacher employment in Nevada districts ranges from 18,547 in Clark, to 7 in Esmeralda and 28 in Mineral. Retirement of just one or two teachers in the latter districts can significantly affect their average salary ranking.

Finally, as noted above, these are data on base pay for teachers. Most school districts offer opportunities for teachers to earn “extra duty pay.” The most common examples are athletic coaching and band. This could also include teaching summer school or other additional responsibilities or duties. The activities that qualify for additional pay and the rates of remuneration are specified in district collective bargaining agreements. The State Department of Education does not collect data on additional remuneration for teachers from these activities. In order to get some sense of the size of this additional remuneration, Table 2 reports some examples from the Clark County 2010-11 collective bargaining agreement (the most recent available to the researchers). Additional duty pay tends to be highest and more common for athletic coaches, although academic activities are rewarded as well. The contract also provides for a \$2000 supplement for teaching in schools designated as “remote locations,” as well as a variety of other modest supplements for certain additional duties or activities. Teaching in summer school is remunerated at \$22/hour.

Nevada Teacher Pay Relative to Other States

Comparing average teacher salaries across states should in principle be a relatively simple exercise. The problem is that while nearly all state education agencies states now collect teacher level salary data, what they report varies from state to state. A commonly reported state-by-state comparison comes from the National Education Association (NEA), which publishes an annual report that includes data on teacher salaries based on a survey of state education agencies. These data are also reported by the U.S Department of Education on their website.³ Unfortunately, these data are not entirely comparable from state-to-state, and are estimated by the NEA for many states, including Nevada. The NEA publishes no information about how they produce these estimates. What is published suggest that there are some inconsistencies between states.⁴ However, given their widespread use, and the fact that the 2011-12 average for Nevada is close to the value reported in Appendix Table 1, we will make use of these data, but they should be treated with caution.

² We are exploring the availability of administrative data on teacher experience that would permit adjustment for differences in teacher experience between the districts.

³http://nces.ed.gov/programs/digest/d12/tables/dt12_084.asp

⁴ For example, some states include supplemental pay such as coaching. Others include district contributions toward the teacher’s share of pension contributions. New York reports median rather than average salaries. National Education Association, 2011, pp. 97-100. We have made repeated inquires to the NEA regarding how the Nevada value was “estimated” but have received no response. The average salary for 2011-12 reported by the NEA is \$54, 559 whereas the administrative data from the Department of Education show an average of \$55,005. The NEA data are within one percent of the Nevada value.

Figure 2 reports the NEA average teacher salaries by state for 2011-12. States are ranked from high (left) to low (right), with the US average teacher salary (\$56,643) added for reference. Nevada ranks 18th by this measure.

Teacher labor markets are local and regional, not national. It is unlikely that many teachers move from Nevada to New York or Massachusetts in search of higher salaries. More relevant are teacher salaries in surrounding states. For this reason we have highlighted in Figure 2 the five states bordering Nevada. We have also highlighted the next ring of states as well (Washington, Montana, Wyoming, Colorado, New Mexico). Our discussion in this text will focus on the border states, although we also report data for the outer ring of surrounding states as well. Turning to the border states, Nevada average salaries are below those in California and Oregon, but above those in Arizona, Idaho, and Utah.

Figure 2 simply compares average pay of teachers by state. It makes no attempt to take into account differences in living costs or differences in the general level of salaries between states. In 2006 the U.S. Department of Education published an experimental index – the Comparable Wage Index (CWI) -- that compares the average level of earnings of college-educated individuals who are not teachers across geographic areas in the United States. Thus, if state A has a value of the CWI ten percent higher than state B, it means that college educated professionals who are not teachers on average earn ten percent more in the former as compared to the latter state. If teacher pay were identical in the two states, then, other things equal, state A would have less competitive teacher pay. While the U.S. Department of Education has not updated these data since 2006, the lead researcher on the project has done so and provides downloadable files on her web page. We make use of these in this report.⁵

The values of the CWI used for Nevada and the surrounding states are reported in Appendix A, Table 3. These data suggest that, as far as college-educated workers are concerned, Nevada is a relatively high salary state. As compared to Nevada, college-educated non-teachers earn nine percent higher salaries in California, however, similar workers earn less in the other surrounding states. For example, as compared to Nevada, in 2011 college-educated non-teachers earned 19 percent less in Idaho and 10 percent less in Oregon.

It is possible to use the CWI to adjust the NEA salary data. Figure 3 reports the NEA average salaries and a measure of teacher salaries that adjusts for the overall level of salaries in each of the surrounding states (labeled “CWI-adjusted”). When Nevada teacher salaries are adjusted by this index teacher pay drops to roughly the middle of the surrounding states.

⁵For a description of the CWI methodology see Lori Taylor and William Fowler (2006) *A Comparable Wage Approach to Geographic Cost Adjustment*. NCES 2006-321. Washington DC: U.S. Department of Education. National Center for Education Statistics (May). <http://nces.ed.gov/pubs2006/2006865.pdf>. This report makes use of an updated data series downloaded from Dr. Taylor’s web site. : http://bush.tamu.edu/research/faculty/Taylor_CWI/

Teacher Employment Trends in Nevada and Surrounding States

As noted in our earlier discussion of district differences within Nevada, the rank of a district or a state will be influenced by the experience composition of its teaching workforce. States with rapid expansion of teacher employment will tend to have relatively more teachers at the lower steps of district salary schedules while states with stagnant or declining teacher enrollment will have many more teachers at the upper steps. Figure 3 shows very large differences in the growth of teacher employment between Nevada and its neighbors. Over the decade between Fall, 2000 and Fall, 2010 Nevada teacher employment grew by 19.4 percent, considerably higher than any of its neighbors. Moreover, the two neighbor states ranked above Nevada in the NEA salary survey (Oregon and California) had stagnant and sharply declining teacher employment growth (.1 percent and -12.5 percent, respectively) over the same period. This means that simple comparisons of averages (or medians) can be misleading indicators of individual teaching salaries.⁶

Given these large differences in employment growth rates between the states, rather than comparing overall average teacher pay, ideally one would want to compare pay for teachers at various points in a teaching career in Nevada and the surrounding states. Unfortunately, the data for making tenure-adjusted teacher salary comparisons are much more limited. Table 3 reports data from a survey of teachers conducted by the U.S. Department of Education. These teacher salary data are from the teacher component of the Schools and Staffing Surveys, a survey of school district administrators and teachers conducted periodically by the U.S. Department of Education. The salary data in these tables are based on survey responses from approximately 48,000 public school teachers nationally.

Figure 5 reports 2007-08 salary data for beginning teachers whose highest degree is a BA for Nevada and surrounding states. Unlike earlier charts, which were based on state administrative data covering all teachers, these salary data are based on a stratified random sample of teachers in each state. Thus the average for the sample of teachers selected is likely to differ from the true value due to sampling error. To take account of this sampling error, Figure 5 (and 6) report a vertical line representing a 90 percent confidence interval for these estimates. California has the highest average starting salary, in addition, a 90 percent confidence interval is entirely above a similar confidence interval for all of the other states. Thus we can conclude that average starting pay in California in 2007-08 was “significantly above” that in other states. Nevada ranked number two in starting pay, but is well below California. Note that the 90 percent confidence band for Nevada is only above (barely) those of Idaho and Arizona. If adjustments were made for the lower CWI values for these states, there would be no significant differences in starting teacher pay.

Figure 6 reports survey data from the same source, but now for senior teachers. In this case, these are teachers whose highest degree is an MA and who have at least twenty years teaching experience. Again, California ranks first and is significantly above the other states. Nevada’s rank drops to third on this measure. However, once again, there are few statistically significant differences between the states. Moreover, the two lowest ranked states also have a lower wage structure overall as measured by the CWI.

⁶ Note that the stagnant and declining teacher labor markets in Oregon and California also mean that employment opportunities in the two states for a Nevada teacher considering relocation may be poor.

Fringe Benefits

Unfortunately, the U.S. Department of Education does not publish fringe benefit data for teachers by state. They do publish data on district expenditures for instructional costs, broken down by sub-function. Since teacher salaries and benefits represent the vast majority of instructional costs, this can provide us with a rough estimate for cross-state comparison of teacher benefits costs as a percent of salaries.⁷ These data are reported in Table 1. The ratio of benefit costs to salaries range from 48 percent in Oregon down to 22 percent in Arizona. Nevada ranks third on this measure, at 37 percent. While comprehensive state-by-state data for the private sector are not available, the U.S. Department of Labor does provide national estimates for private-sector workers. For private sector managers and other professionals, a similar measure of fringe benefits as a percent of salaries is roughly 27 percent.⁸

A Closing Note on Efficiency

The focus of this report has been on the level of teacher pay and benefits, vis-à-vis other states or with respect to private sector earnings. Individual teacher pay in Nevada school districts, as in most school districts across the country, is largely driven by rigid salary schedules that set base pay according to years of teaching experience and education credits or credentials. It is beyond the scope of this study to take up the question of whether this compensation represents an efficient human resource policy. Suffice it to say that a strong case to be made that it is not. Inefficiency in compensation policy means that the same average spending per teacher, whether above or below that of surrounding states, could produce a higher level of teacher quality than it currently does. How these inefficiencies in the structure of Nevada teacher compensation might be reduced is a topic for another report.

⁷The primary benefit costs for school districts are retirement benefits and health insurance.

⁸ Benefit rates for private sector managers and professionals are computed from data in Table 5. <http://www.bls.gov/news.release/pdf/ecec.pdf>. To make the ratio comparable to public school teachers, paid leave for holidays and vacations and bonus pay was deducted from the numerator and bonus pay was added to the denominator of the ratio.

Table 1

Examples of Extra Duty Pay for Clark County Teachers*

Football Head Coach	\$3,941
Volleyball Head Coach	\$2,575
Tennis Head Coach	\$3,311
Band	\$3,398
Newspaper	\$1,962
Yearbook	\$2,803
Chess Club	\$981

* Based on 2010-11 Clark County collective bargaining agreement for a teacher with 15 years teaching experience.

Table 2:

Total Salaries and Benefit Expenditures for Instructional Personnel in Nevada and Surrounding States, 2008-09

	Salaries (000)	Benefits (000)	Ben/Sal, %
Oregon	\$1,948,924	\$938,113	48.1%
Utah	\$1,500,840	\$613,409	40.9%
Nevada	\$1,423,181	\$523,471	36.8%
Wyoming	\$504,324	\$176,771	35.1%
Washington	\$4,050,112	\$1,339,697	33.1%
Idaho	\$826,522	\$267,652	32.4%
New Mexico	\$1,262,435	\$392,632	31.1%
California	\$24,365,952	\$7,573,923	31.1%
Montana	\$571,819	\$162,073	28.3%
Colorado	\$2,970,930	\$686,311	23.1%
Arizona	\$3,901,008	\$842,989	21.6%
Source: http://nces.ed.gov/programs/digest/d11/tables/dt11_189.asp			

Figure 1

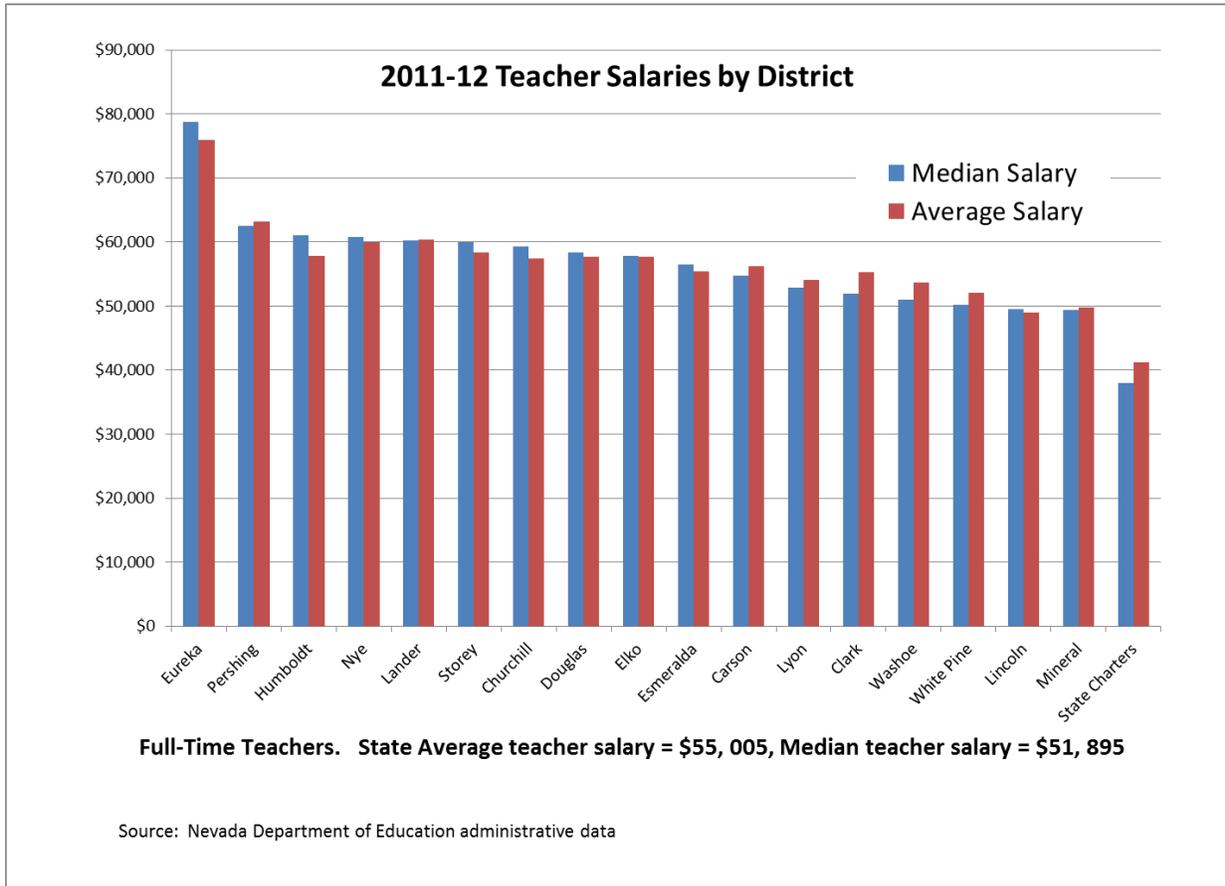


Figure 2

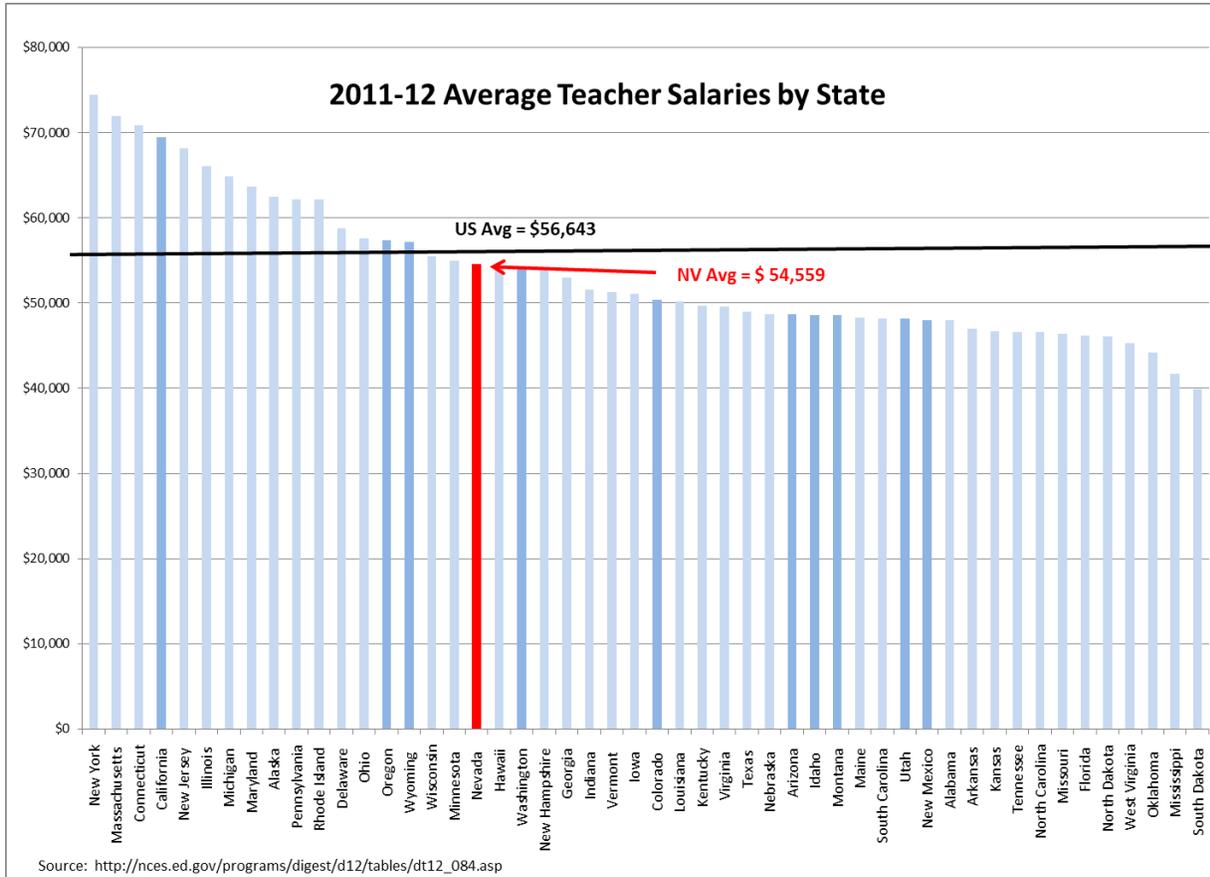
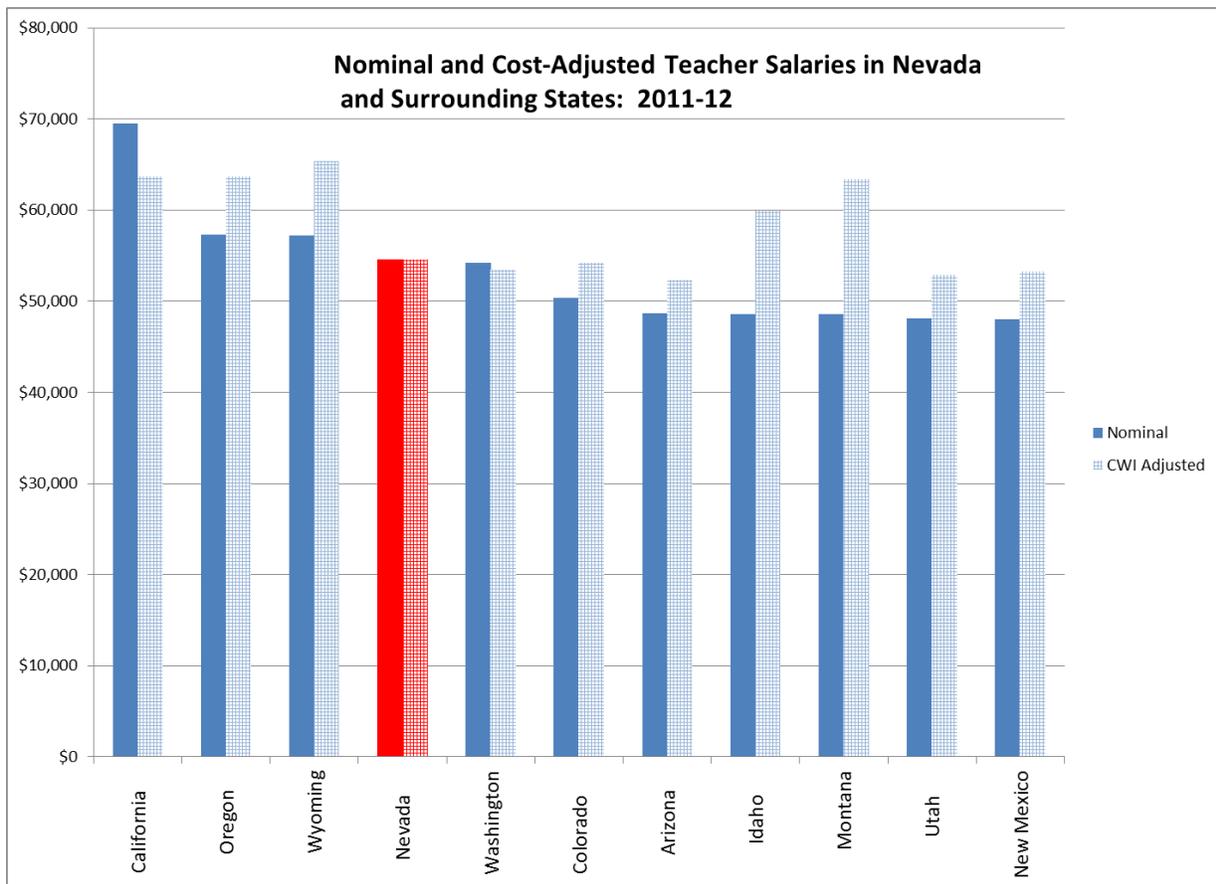


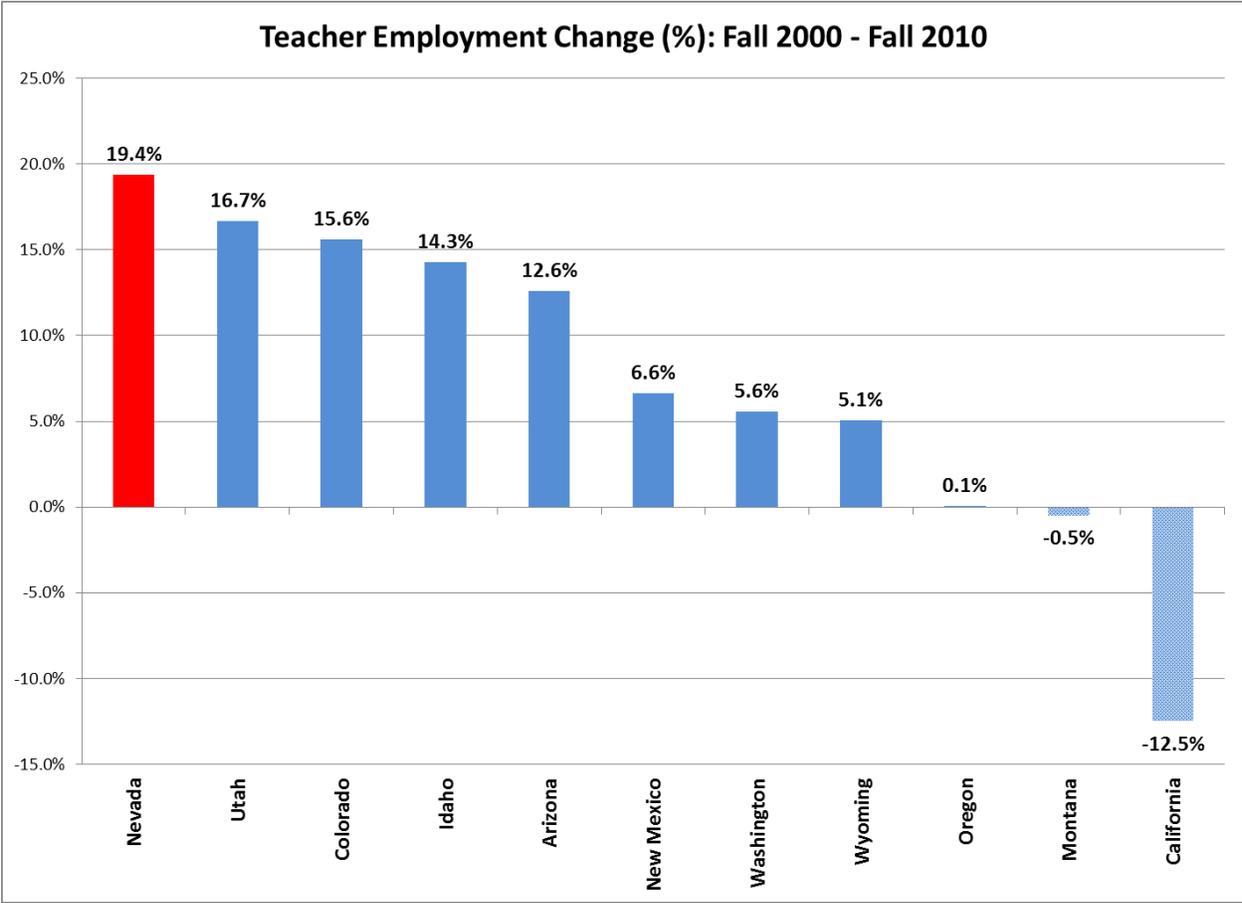
Figure 3



Source: Teacher salaries: http://nces.ed.gov/programs/digest/d12/tables/dt12_084.asp

CWI: http://bush.tamu.edu/research/faculty/Taylor_CWI/

Figure 4

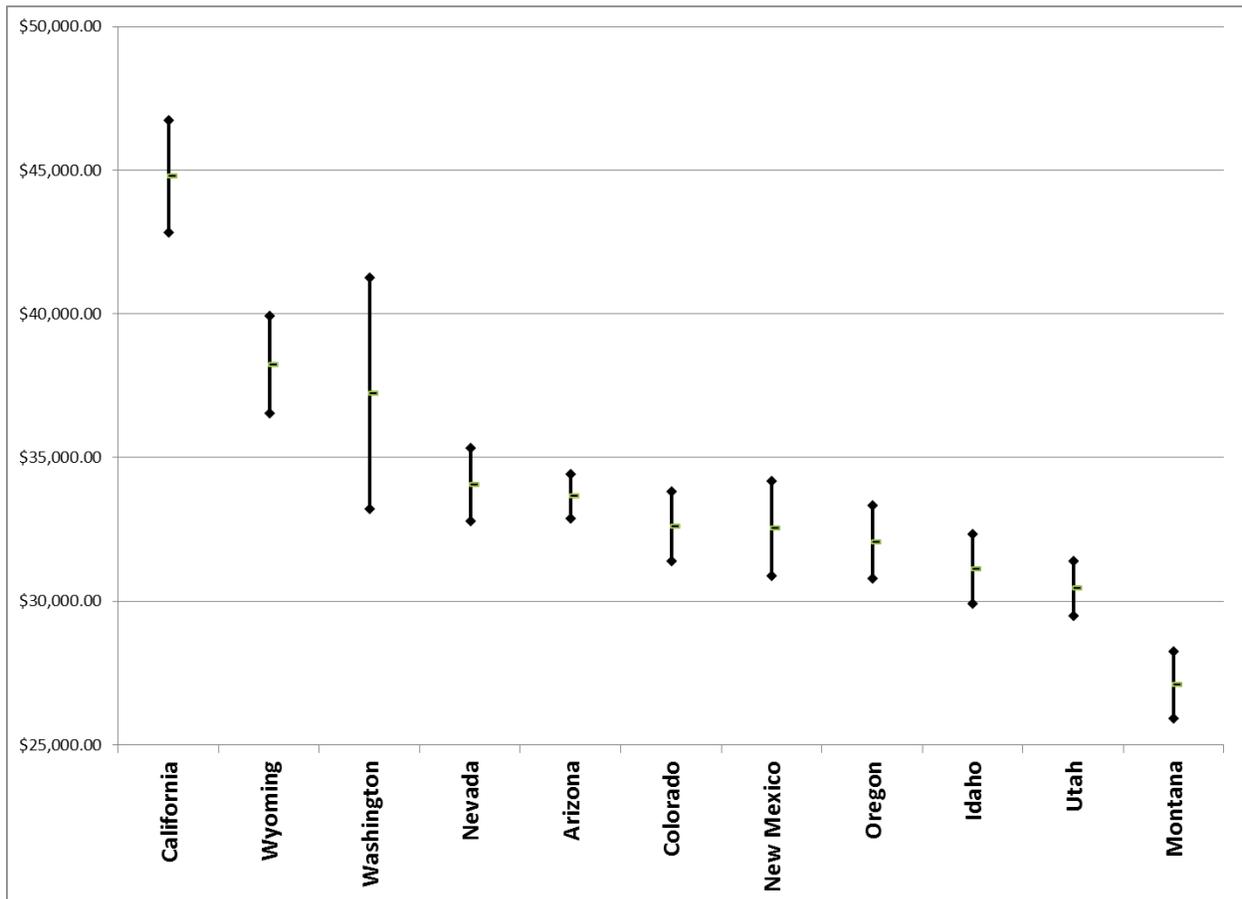


Source: http://nces.ed.gov/programs/digest/d12/tables/dt12_070.asp

Figure 5:

Average Salary for Teacher with BA and Less Than Two Years Experience: 2007-08

(90 Percent Confidence Interval)

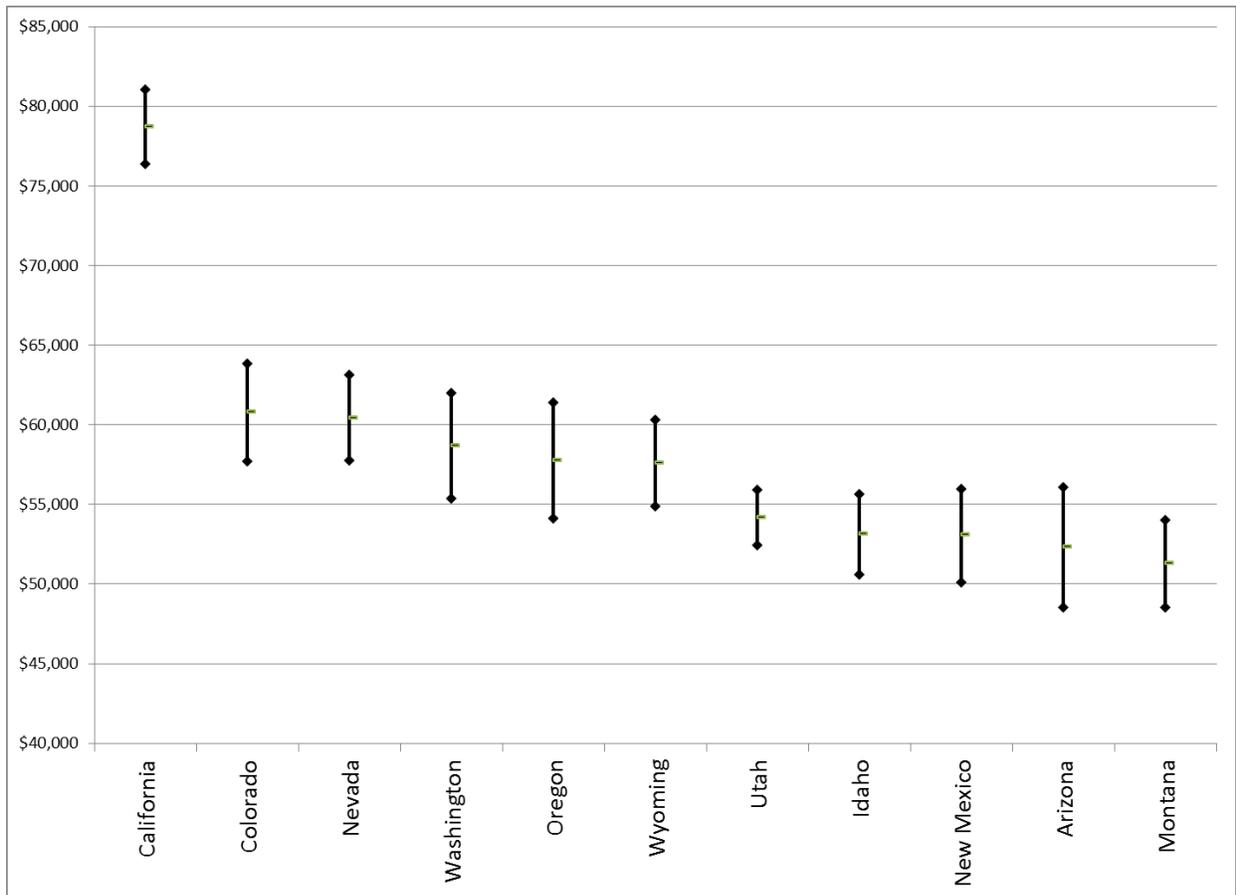


Source: http://nces.ed.gov/programs/digest/d11/tables/dt11_081.asp

Figure 6:

Average Salary for Teacher Whose Highest Degree is MA with More Than 20 Years Teaching Experience:
2007-08

(90 Percent Confidence Interval)



Source: http://nces.ed.gov/programs/digest/d11/tables/dt11_082.asp

Appendix A:

Data Tables

Table A1: 2011-12 Nevada Full-Time Teacher Salaries by District

	Median	Average	N
Eureka	\$78,789	\$75,933	31
Pershing	\$62,532	\$63,163	66
Humboldt	\$61,027	\$57,891	232
Nye	\$60,833	\$59,961	322
Lander	\$60,218	\$60,362	79
Storey	\$60,032	\$58,417	33
Churchill	\$59,271	\$57,455	253
Douglas	\$58,340	\$57,680	412
Elko	\$57,778	\$57,711	628
Esmeralda	\$56,523	\$55,424	7
Carson	\$54,762	\$56,230	541
Lyon	\$52,837	\$54,049	555
Clark	\$51,895	\$55,222	18547
Washoe	\$50,968	\$53,658	4027
White Pine	\$50,211	\$52,094	105
Lincoln	\$49,464	\$48,961	80
Mineral	\$49,351	\$49,740	28
State Charters	\$38,000	\$41,153	375
All Districts	\$51,895	\$55,005	26321

Source: Nevada Department of Education. Administrative Data.

Table A2:

2011-12 NEA-Estimated Teacher Salaries by State

	United States	\$56,643
1	New York	\$74,449
2	Massachusetts	\$72,000
3	Connecticut	\$70,821
4	California	\$69,496
5	New Jersey	\$68,207
6	Illinois	\$66,053
7	Michigan	\$64,879
8	Maryland	\$63,634
9	Alaska	\$62,425
10	Pennsylvania	\$62,215
11	Rhode Island	\$62,186
12	Delaware	\$58,800
13	Ohio	\$57,528
14	Oregon	\$57,348
15	Wyoming	\$57,222
16	Wisconsin	\$55,492
17	Minnesota	\$54,959
18	Nevada	\$54,559
19	Hawaii	\$54,268
20	Washington	\$54,193
21	New Hampshire	\$54,177
22	Georgia	\$52,938
23	Indiana	\$51,629
24	Vermont	\$51,306
25	Iowa	\$51,037
26	Colorado	\$50,407
27	Louisiana	\$50,179
28	Kentucky	\$49,730
29	Virginia	\$49,560
30	Texas	\$49,017
31	Nebraska	\$48,718
32	Arizona	\$48,691
33	Idaho	\$48,551
34	Montana	\$48,546
35	Maine	\$48,283
36	South Carolina	\$48,176
37	Utah	\$48,159
38	New Mexico	\$48,011
39	Alabama	\$48,003
40	Arkansas	\$46,959
41	Kansas	\$46,718
42	Tennessee	\$46,613
43	North Carolina	\$46,605
44	Missouri	\$46,406

45	Florida	\$46,232
46	North Dakota	\$46,058
47	West Virginia	\$45,320
48	Oklahoma	\$44,156
49	Mississippi	\$41,646
50	South Dakota	\$39,850

Source: National Education Association. http://nces.ed.gov/programs/digest/d12/tables/dt12_084.asp

Table A3.

Average Teacher Salaries, Comparable Wage Index (CWI), and CWI-adjusted Salaries for Nevada and Surrounding States: 2011-12.

	Avg Salary	CWI	CWI-adj Salary
California	\$69,496	1.09	\$63,635
Oregon	\$57,348	0.90	\$63,720
Wyoming	\$57,222	0.87	\$65,411
Nevada	\$54,559	1.00	\$54,559
Washington	\$54,193	1.01	\$53,491
Colorado	\$50,407	0.93	\$54,201
Arizona	\$48,691	0.93	\$52,356
Idaho	\$48,551	0.81	\$59,940
Montana	\$48,546	0.77	\$63,432
Utah	\$48,159	0.91	\$52,922
New Mexico	\$48,011	0.90	\$53,295

Source: Avg Salary: National Education Association.
http://nces.ed.gov/programs/digest/d12/tables/dt12_084.asp

CWI: http://bush.tamu.edu/research/faculty/Taylor_CWI/