COMPOUNDING CHALLENGES:

Student Achievement and the Distribution of Human and Fiscal Resources in Oregon's Rural School Districts

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Abstract

This report presents findings from an investigation into relationships between academic achievement and the distribution of fiscal resources among rural school districts in Oregon. The investigation was prompted by earlier-reported findings suggesting the critical nature of both achievement gaps and resource gaps among rural school districts in the state. A variety of statistical procedures yielded consistent findings indicating that there is considerable disparity in the distribution of fiscal resources among rural districts, and that the level of fiscal resources available to districts significantly influences educational outcomes.

Interpreting these findings within the socioeconomic context of rural Oregon, we find that

- The districts facing the greatest challenges receive the fewest resources and produce the lowest levels of academic achievement, and
- The districts facing the fewest challenges receive the greatest resources and produce the highest levels of academic achievement.

It is a pattern in which the distribution of resources appears to be compounding, rather than mitigating, socioeconomic disparities. In effect, this maldistribution of resources appears to be working against closing achievement gaps.

Results also indicate that the inequitable distribution of resources on a per pupil basis is not the result of the smaller scale of schooling in some parts of the state, offering further support for earlier-reported findings suggesting that school or district consolidation would be a poor policy choice.

Introduction

A recent national report ranked Oregon as the U.S. state with the greatest inequity in per pupil funding among its rural school districts.[1] The same report also found that rural schools in Oregon face relatively high poverty and other demographic challenges, and have inappropriate or inadequate policies to overcome those challenges and improve student achievement outcomes. Another study[2] identified "dramatic" gaps in academic achievement levels among Oregon students, and called for increased funding to districts serving student populations with higher rates of English Language Learners, minority students, and economically disadvantaged students.

In light of such research findings, we set out to further explore the relationship between academic achievement and the distribution of fiscal resources among Oregon's rural school districts. Our intent was twofold: (1) To determine whether earlier findings about fiscal inequity hold true when analyzed using more rigorous statistical procedures; and (2) If fiscal inequity is indeed present, to determine whether that inequity has an impact on student achievement. With that in mind, two primary research questions guided the analyses:

1. In what ways and to what extent does the *availability* of fiscal resources vary among rural school districts?
2. In what ways and to what extent does the *distribution* of fiscal resources impact student achievement in rural school districts?

The research questions were addressed using standard statistical procedures (independent samples t-tests, bivariate correlation analysis, and multivariate regression analysis). In order to focus the investigation on rural districts, the cases were delimited to the 147 Oregon school districts designated by the National Center for Education Statistics as locale 6 (located in communities with a population under 25,000), locale 7 (located in communities of less than 2,500 and outside a metropolitan statistical area), or locale 8 (located in communities of less than 2,500 but within a metropolitan statistical area). Fifteen of the 147 rural districts were excluded due to unavailability of achievement data, leaving 132 districts for analysis. These 132 districts represent 67% of all school districts in Oregon, serving 36% of the state's students.

All data were obtained from the Oregon Department of Education, the National Center for Education Statistics, and the U.S. Census Bureau, and are available to the general public.

T-Test Findings for Higher- and Lower-Achieving Districts

We first conducted independent samples t-tests to determine whether "higher-achieving" rural districts and "lower-achieving" rural districts differed on several key variables. "Higher-achieving" refers to those 66 districts at or above the median (of rural districts) for the percentage of students scoring proficient on 2003-2004 state assessments in math and English/language arts. "Lower-achieving" refers to those 66 districts below the state median. Results indicate a number of statistically significant[3] differences for both demographic and resource variables. Table 1 summarizes these results.

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[1] Johnson, J. & Strange, M. (2005). *Why rural matters.* Arlington, VA: Rural School and Community Trust. Specifically, the variable used in determining this ranking (termed "general fund revenue gap") represented the range, expressed in dollars, between the 80th percentile and the 20th percentile of per pupil state and local revenue for rural schools. In Oregon, the range was $7,391. The national median was $2,173.

[2] Securing Adequate Funding for Education Taskforce. (2003). *Report on K-12 financing in Oregon.* Eugene, OR: Department of Planning, Public Policy, and Management, University of Oregon.

[3] Strictly speaking, tests of statistical significance are not necessary for analyses where the entire population of

Table 1.
Group statistics from independent samples t-test (higher- and lower-achieving districts)

Variable	Achievement level	Mean
Percent adults without high school diploma***	Lower	.2651
	Higher	.2195
Percent adults with college degree***	Lower	.1854
	Higher	.2332
Adult unemployment rate	Lower	.4038
	Higher	.3896
Total district enrollment	Lower	1,251
	Higher	968
Percent Hispanic students*	Lower	.1139
	Higher	.0706
Percent Black students	Lower	.0061
	Higher	.0054
Percent White students**	Lower	.8229
	Higher	.8814
Percent poverty (meal rate)***	Lower	.5047
	Higher	.4026
Percent migrant students	Lower	.0632
	Higher	.0340
Local property valuation per pupil	Lower	$252,618
	Higher	$278,822
Local revenue per pupil	Lower	$2,161
	Higher	$2,509
County/ESD revenue per pupil**	Lower	$115
	Higher	$296
State revenue per pupil	Lower	$6,093
	Higher	$7,179
Federal revenue per pupil	Lower	$1,074
	Higher	$1,084
State and local revenue per pupil**	Lower	$8,369
	Higher	$9,984
Total revenue per pupil**	Lower	$9,443
	Higher	$11,068
Direct classroom expenditures per pupil**	Lower	$3,968
	Higher	$4,587
Classroom support expenditures per pupil	Lower	$1,105
	Higher	$1,145
Pupil-teacher ratio	Lower	17.5
	Higher	16.2
Pupil-administrator ratio	Lower	182.5
	Higher	195.1
Percent teachers with graduate degree	Lower	.4149
	Higher	.3734
Percent teachers with emergency/provisional certification	Lower	.4702
	Higher	.3562

*Notes: Results are statistically significant at * $p \leq .050$, ** $p \leq .010$, *** $p \leq .001$*

cases is used, as opposed to a sample drawn from the population. It is, however, customary to treat statistically non-significant results as lacking practical significance as well.

Significant results for several variables in the above table allow us to state with confidence that higher-achieving districts and lower-achieving districts are different from each other in key ways related to both socioeconomic characteristics and human and fiscal resources.

Higher-achieving school districts, on average, serve:

- Communities with higher levels of adult education (4.5% fewer adults who did not finish high school; 4.8% more college graduates).
- Student populations that are less racially diverse (4.3% fewer Hispanic students; 5.8% more white students).
- Student populations that are less impoverished (10.2% fewer students qualifying for free or reduced meals).

These findings correspond with the sizable amount of literature on achievement gaps, and point to the fact that Oregon school districts serving higher proportions of at-risk students face considerable challenges in providing appropriate educational opportunities and ensuring high academic achievement for all students.

Differences among resource variables indicate gaps in revenues and expenditures between higher and lower achieving districts.

Higher-achieving school districts, on average:

- Receive $181 (157%) more per pupil in county/ESD revenue.
- Receive $1,615 (19%) more per pupil in combined state and local revenue.
- Receive $1,625 (17%) more per pupil in total local, state, and federal revenue.
- Spend $618 (16%) more per pupil on direct classroom expenditures and have lower student-teacher ratios and fewer teachers with emergency or provisional certification.

Note: See figures 1-9 in Appendix A (pages 13-14) for graphs depicting these differences.

Findings from this t-test analysis suggest that Oregon's rural schools facing greater challenges receive fewer resources and produce lower achievement results. Such findings might be interpreted to suggest that fiscal policy in Oregon operates in ways that maintain and even intensify inequity in academic outcomes among rural students. In other words, funding gaps might be contributing to larger achievement gaps.

T-Test Findings for Highest- and Lowest-Achieving Districts

To further investigate this pattern, we performed an independent samples t-test to compare the state's highest-achieving rural districts (the top 25% of rural districts as ranked by the achievement measure—31 districts) with the lowest-achieving rural districts (the bottom 25% of rural districts as ranked by the achievement measure—33 districts). Results indicate the presence of even wider gaps in achievement and resources, and identify additional variables that contribute to understanding and explaining the presence of these gaps. Table 2 summarizes these results.

Table 2.
Group statistics from independent samples t-test
(highest- and lowest-achieving districts)

Variable	Achievement level	Mean
Percent adults without high school diploma***	Lowest	.2765
	Highest	.1924
Percent adults with college degree***	Lowest	.1779
	Highest	.2522
Adult unemployment rate	Lowest	.3998
	Highest	.3724
Total district enrollment	Lowest	836
	Highest	597
Percent Hispanic students**	Lowest	.1238
	Highest	.0495
Percent Black students	Lowest	.0064
	Highest	.0040
Percent White students	Lowest	.8075
	Highest	.9068
Percent poverty (meal rate)***	Lowest	.5059
	Highest	.3612
Percent migrant students*	Lowest	.0854
	Highest	.0252
Local property valuation per pupil**	Lowest	$214,831
	Highest	$317,636
Local revenue per pupil**	Lowest	$1,984
	Highest	$2,755
County/ESD revenue per pupil**	Lowest	$123
	Highest	$352
State revenue per pupil	Lowest	$6,759
	Highest	$8,047
Federal revenue per pupil	Lowest	$1,102
	Highest	$1,199
State and local revenue per pupil**	Lowest	$8,866
	Highest	$11,154
Total revenue per pupil**	Lowest	$9,968
	Highest	$12,354
Direct classroom expenditures per pupil**	Lowest	$3,964
	Highest	$5,188
Classroom support expenditures per pupil	Lowest	$1,017
	Highest	$1,120
Pupil-teacher ratio	Lowest	17.0
	Highest	14.8
Pupil-administrator ratio	Lowest	158.3
	Highest	168.6
Percent teachers with graduate degree	Lowest	.3989
	Highest	.3367
Percent teachers with emergency/provisional certification	Lowest	.6163
	Highest	.3564

*Notes: Results are statistically significant at * $p \leq .050$, ** $p \leq .010$, *** $p \leq .001$*

Differences among demographic variables reinforce the findings about achievement gaps reported in the earlier comparison.

Highest-achieving school districts, on average, serve:

- Communities with even higher levels of adult education (8.4% fewer adults who did not finish high school; 7.4% more college graduates).
- Student populations that are even less racially diverse (7.4% fewer Hispanic students; 9.9% more White students).
- Student populations that are even less impoverished (14.5% fewer students qualifying for free or reduced meals).
- Significantly fewer migrant students (six percentage points fewer), a difference that was non-significant in the first comparison.

Differences among resource variables again indicate gaps in revenues and expenditures.

Highest-achieving districts, on average:

- Receive $772 (39%) per pupil more in local revenue (a difference that was non-significant in the first comparison).
- Receive $228 (186%) more per pupil in county/ESD revenue (a 26% larger gap than in the first comparison).
- Receive $2,289 (26%) more per pupil in combined state and local revenue (a 41% larger gap than in the first comparison).
- Receive $2,385 (24%) more per pupil in total local, state, and federal revenue (a 46% larger gap than in the earlier comparison).
- Spend $1,223 (31%) more per pupil on direct classroom expenditures (a 97% larger gap than in the earlier comparison).

Note: See figures 10-21 in Appendix B (pages 15-16) for graphs depicting these differences.

Findings from this set of t-tests illustrate even more strongly that Oregon's rural schools facing the greatest challenges receive less funding, and further suggest that fiscal policy plays a contributing role in achievement gaps among rural school districts.

Bivariate Correlation Analyses

We next conducted bivariate correlation analyses in an effort to determine what school and community characteristics help to "explain" differences in achievement levels.[4] Findings here represent a step beyond identifying differences among achievement categories (as we did with t-tests). Correlation results allow us to measure how changes in independent variables are associated with changes in the dependent variable. In practical terms, we can interpret these results to describe how demographic characteristics and educational policy decisions influence student achievement (i.e., the percentage of students meeting or exceeding state standards).

[4] We must be careful in interpreting correlation coefficients, following the adage that "correlation does not equal causation." Results from correlation analyses demonstrate the extent to which changes in one variable *parallel* changes in another; such analyses cannot prove whether changes in one variable are the cause of changes in the other. Thus, when we speak of "explaining" differences, we mean explaining *statistically* (i.e., describing the strength and direction of relationships between variables), not *causally*.

Table 3.
Summary of results from bivariate correlation analysis for student achievement (n = 132)

Variable	Student Achievement
Composite achievement	1
Percent adults without high school diploma	-.476**
Percent adults with college degree	.423**
Adult unemployment rate	-.193*
Total district enrollment	-.107
Percent Hispanic students	-.217*
Percent Black students	-.133
Percent White students	.287**
Percent poverty (meal rate)	-.465**
Percent migrant students	-.202
Local property valuation per pupil	.282**
Local revenue per pupil	.332**
County/ESD revenue per pupil	.182*
State revenue per pupil	.220*
Federal revenue per pupil	-.011
State and local revenue per pupil	.315**
Total revenue per pupil	.301**
Direct classroom expenditures per pupil	.314**
Classroom support expenditures per pupil	.015
Pupil-teacher ratio	.025
Pupil-administrator ratio	-.122
Percent teachers with graduate degree	-.118
Percent teachers with emergency/provisional certification	-.177*

*Notes: Results are statistically significant at * $p \leq .050$, ** $p \leq .010$, *** $p \leq .001$*

Following are interpretations of results for independent variables demonstrating a significant relationship with the dependent variable representing student achievement. The independent variables are divided into three categories: community demographics, student demographics, and fiscal/other variables that are dictated by educational policy decisions.

Community demographics

- Percent adults without a high school diploma *(negative correlation)* – As the percentage of adults without a high school diploma increases, performance on state-mandated tests decreases.

- Percent adult unemployment *(negative correlation)* – As the percentage of unemployed adults increases, performance on state-mandated tests decreases.

- Percent adults with college degrees *(positive correlation)* – As the percentage of adults with college degrees increases, performance on state-mandated tests increases.

Student demographics

- Percent Hispanic students *(negative correlation)* – As the percentage of Hispanic students enrolled in the district increases, performance on state mandated tests decreases.

- Percent White students *(positive correlation)* – As the percentage of white students enrolled in the district increases, performance on state mandated tests increases.

- Student poverty *(negative correlation)* – As the percentage of students eligible for free or reduced meals increases, performance on state mandated tests decreases.

Educational policy variables

- Local property valuation per pupil *(positive correlation*) – As the dollar value of the local property tax base increases, performance on state-mandated tests increases.

- Local revenue per pupil *(positive correlation)* – As the dollar amount of local revenue per pupil increases, performance on state-mandated tests increases.

- County/ESD revenue per pupil *(positive correlation)* – As the dollar amount of county/ESD revenue per pupil increases, performance on state-mandated tests increases.

- State revenue per pupil *(positive correlation)* – As the dollar amount of state revenue per pupil increases, performance on state-mandated tests increases.

- Combined state and local revenue per pupil *(positive correlation)* – As the dollar amount of combined state and local revenue per pupil increases, performance on state-mandated tests increases.

- Total revenue per pupil *(positive correlation)* – As the dollar amount of total revenue per pupil increases, performance on state-mandated tests increases.

- Direct classroom expenditures per pupil *(positive correlation)* – As the dollar amount of direct classroom expenditures per pupil increases, performance on state-mandated tests increases.

- Percent teachers with emergency/provisional certification *(negative correlation)* – As the percentage of teachers with emergency or provisional certification increases, performance on state mandated tests decreases.

Results from this analysis reinforce and extend results from the t-test in disclosing the presence of achievement gaps and funding gaps among Oregon's rural school districts. Because bivariate correlation analyses measure the influence of independent variables on the dependent variable, these results can be interpreted to predict changes in achievement levels that would likely result from changes in socioeconomic challenges and the policy context in which schools operate.

Specifically, we can interpret these results to suggest that (1) as challenges mount, achievement declines; and (2) as resources increase, student achievement improves.

While these findings reinforce and extend findings from the t-test analysis, bivariate correlation analysis is not without limitations. The primary limitation that concerns us here is the inability to account for *confounding influences*. That is, we see in the above results that student achievement improves with increases in instructional spending and with increases in adult educational attainment. If instructional spending is higher in districts with higher adult educational attainment rates, then it is impossible for us to determine whether one, the other, or both variables are exerting influence over student achievement. To isolate the influences of individual independent variables, we turn to multivariate regression analysis.

Multivariate Regression Analysis

Regression analysis represents an even more rigorous investigation of what factors and conditions exert influence over a particular dependent variable. Of particular usefulness, multivariate regression analysis allows us to investigate the unique influence of each independent variable while holding constant all other variables. That is, the procedure allows us to isolate each individual variable and consider it separately from the influences of all other variables.

The particular method of regression analysis deployed here (stepwise regression) consists of a series of regressions performed in a step-by-step fashion, removing all non-significant variables after each step and ultimately resulting in the model with the best "fit" (i.e., the regression model that best explains variance in the dependent variable).

We performed this analysis to predict the dependent variable student achievement from the same list of 22 independent variables that were used in the earlier analyses. Results are presented in Table 4.

Table 4.
Summary of results for fitted regression model
predicting student achievement (n = 132)

Independent Variable	B	SE B	ß
Percent poverty (meal rate)	-18.040	6.387	-.258**
Direct classroom expenditures per pupil	.003	.001	.340***
Percent adults with college degree	34.770	11.658	.271**
Percent teachers with emergency/provisional certification	-.398	.129	-.255**

*Adjusted R^2 = .392; * p ≤ .050, ** p ≤ .010, *** p ≤ .001*

Direct classroom expenditures per pupil has the strongest influence over achievement (ß = .340), followed by percent adults with college degree, percent student poverty, and percent teachers with emergency/provisional certification. It is important to recall here that a multivariate regression measures the influence of each independent variable while controlling for the influence of other independent variables. Thus, the substantial influence of direct classroom expenditures has nothing to do with the fact that districts that spend more might have lower levels of poverty, better qualified teachers, or better educated adults. The level of instructional expenditures per pupil exerts significant influence over student achievement above and beyond the influence of these other variables.

See Figures 22-26 in Appendix C (page 17-23) for maps illustrating the distributions (by quartiles) of district values for the five variables included in the fitted regression model. Note that the first four (Achievement, Poverty, Classroom Expenditures, and Teacher Certification) were created using the most recently available data for district boundaries (2003-04), and share a common legend for identifying school districts. The fourth (Adult College Education) has its own legend, since it is based on 2000 Census data and was created using a map of Oregon districts as they existed in 2000.

Accounting for Size and Efficiency

What are the causes of disparity in the level of fiscal resources among rural Oregon districts? One possible explanation is district size—that is, per pupil revenues and expenditures in some districts might be inflated due to the purported inefficiency of operating smaller schools in sparsely populated rural areas. Their small size tends to inflate both per pupil spending and many other variables.

The possibility that smallness is the culprit in disparity often achieves the status of an assumption, and the policy remedy that frequently emerges is to consolidate districts in pursuit of greater economies of scale. The SAFET (2003) report considered this possibility, and concluded that (1) potential cost savings from consolidating schools and districts to achieve economies of scale were negligible, and (2) potential harm to student achievement and to the well-being of local communities was substantial.

Nonetheless, to explore the possibility that inefficiency is the cause of disparities in fiscal resources in rural Oregon, we performed two additional multivariate regression analyses to determine what independent variables statistically explain (1) combined state and local revenue per pupil and (2) direct classroom expenditures per pupil. The influence of district enrollment in these analyses was notably weaker than the influence of community demographic variables like median household income, adult unemployment rate, and high school graduation rates among adults. These findings suggest that socioeconomic well-being, not inefficiency, drives per pupil spending in rural Oregon schools.

Conclusion

The patterns identified in the above analyses are unmistakable. Lower-achieving rural school districts in Oregon face significantly greater challenges and operate with significantly lower levels of resources than other districts. In short, inequities in the distribution of education dollars and teacher quality are apparently working to maintain and even worsen inequity in the distribution of student academic achievement.

Lower-achieving rural districts serve student populations with higher concentrations of economically disadvantaged students, Hispanic students, and migrant students. They serve communities with higher poverty rates, lower property values (thus, a smaller tax base), and lower rates of adult educational attainment. What makes these inequities in the distribution of resources even more egregious is the fact that schools facing these kinds of challenges require more—*not less, and not even the same*—resources if their children are to reach the same achievement levels as children in other communities.[5]

The state's effort to equalize funding is insufficient to make up for disparity in local revenue as it is described here. Local revenue per pupil is significantly higher in higher-achieving districts, as is county/ESD revenue per pupil, due to the differences among communities in their ability to generate local revenue. The state funding mechanism is intended to level the playing field, but it does not do so among all rural Oregon school districts. State revenue per pupil in Oregon was non-significant in t-test analyses, suggesting that there is no real difference between the levels of state revenue provided to the lower-achieving districts operating with less local revenue and facing greater demographic challenges, compared to higher achieving districts facing fewer challenges with more money.

The combination of disparity in local tax base/local revenue and inadequacy of state equalization funding creates significant disparities in the amount of overall operating revenue available to lower-achieving school districts. This limits funding for classroom instruction, resulting in lower per pupil instructional expenditures, a variable that is closely associated with decreased student

[5]For research suggesting that adequate funding is crucial for closing achievement gaps, see

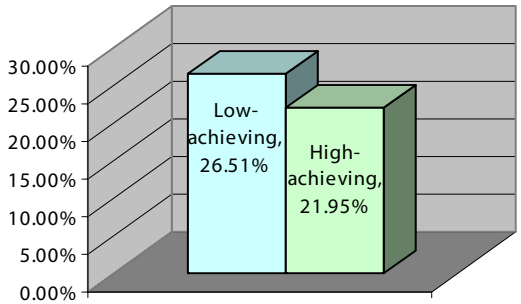
Carey, K. (2002). *Education funding and low-income children: A review of current research.* Washington, DC: Center on Budget and Policy Priorities. Retrieved July 1, 2004: http://www.centeronbudget.org

Kober, N. (2001). *It takes more than testing: Closing the achievement gap.* Center on Education Policy. Retrieved June 6, 2004 from http://ctredpol.org/improvingpublicschools/closingachievementgap.pdf

achievement. The funding constraints also apparently affect the ability of lower achieving districts to attract and retain qualified teachers, resulting in higher rates of emergency-certified teachers, another variable that is closely associated with lower student achievement. The net result: disparities in the level of challenges faced by rural Oregon school districts are compounded rather than mitigated.

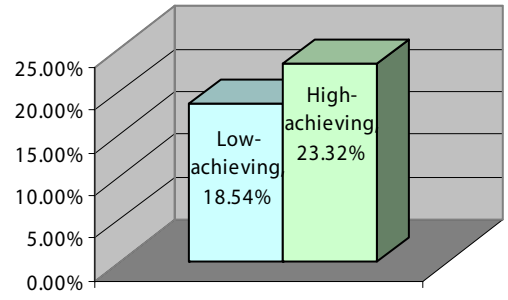
Appendix A
T-test results for comparison of high- and low-achieving districts

Figure 1. Percent adults without high school diploma (2000)



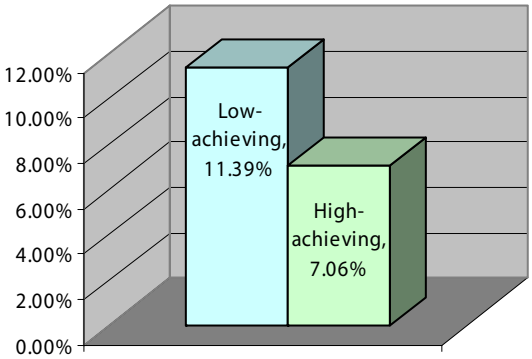
Differences are statistically significant at $p \leq .001$

Figure 2. Percent adults with college degree (2000)



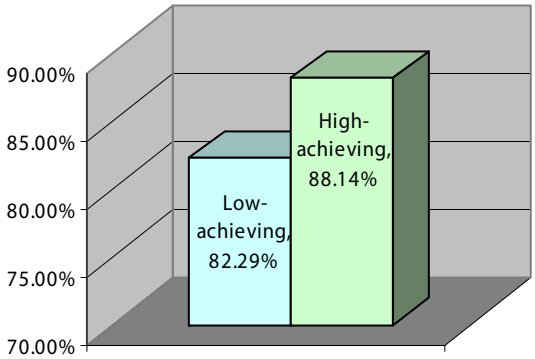
Differences are statistically significant at $p \leq .001$

Figure 3. Percent Hispanic students (2003-4)



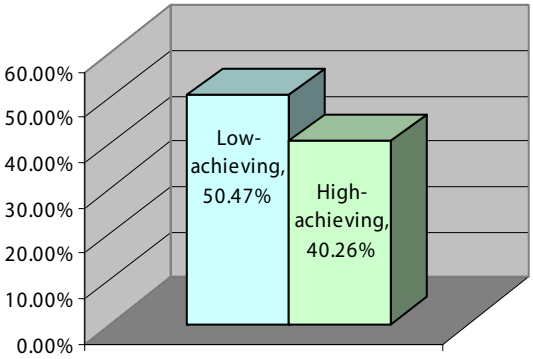
Differences are statistically significant at $p \leq .050$

Figure 4. Percent White students (2003-4)



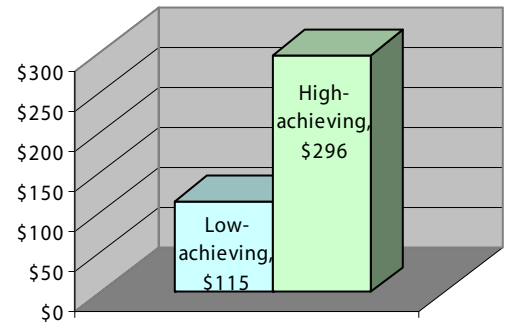
Differences are statistically significant at $p \leq .010$

Figure 5. Percent student poverty (2003-4)



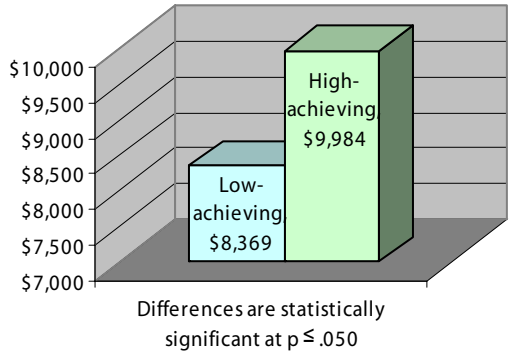
Differences are statistically significant at $p \leq .001$

Figure 6. County/ESD revenue per pupil (2003-4)



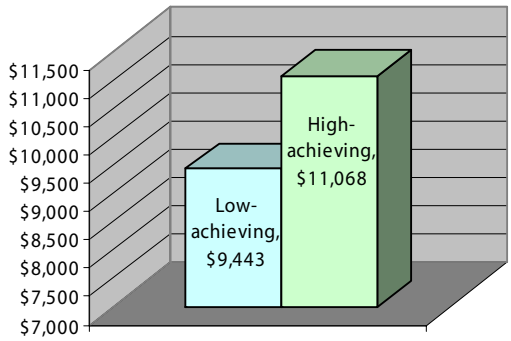
Differences are statistically significant at $p \leq .010$

Figure 7. Combined state and local revenue per pupil



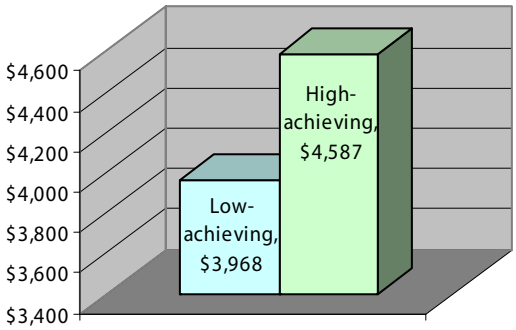
Differences are statistically significant at $p \leq .050$

Figure 8. Total revenue per pupil (2003-4)



Differences are statistically significant at $p \leq .050$

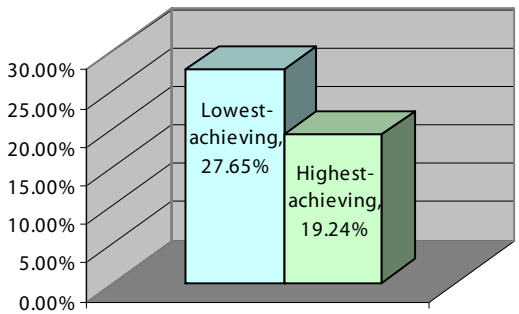
Figure 9. Direct classroom expenditures per pupil



Differences are statistically significant at $p \leq .010$

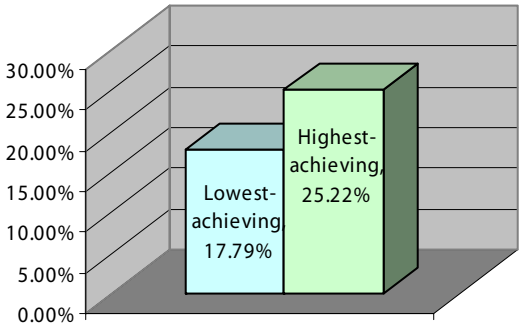
Appendix B:
T-test results for comparison of highest- and lowest-achieving districts

Figure 10. Percent adults without high school diploma (2000)



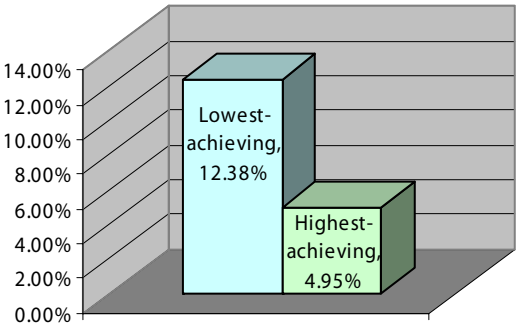
Differences are statistically significant at p ≤ .001

Figure 11. Percent adults with college degree



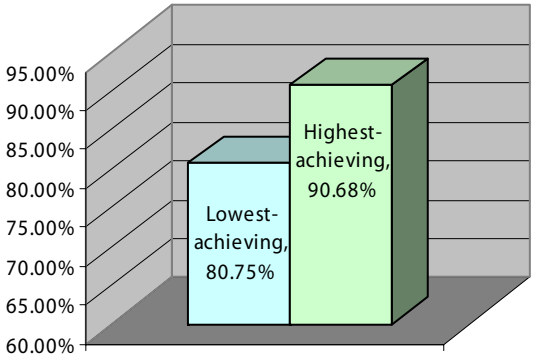
Differences are statistically significant at p ≤ .001

Figure 12. Percent Hispanic students (2003-4)



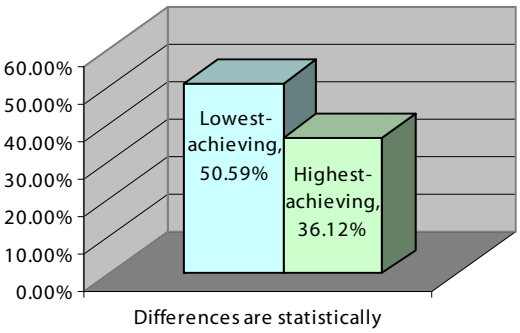
Differences are statistically significant at p ≤ .010

Figure 13. Percent white students (2003-4)



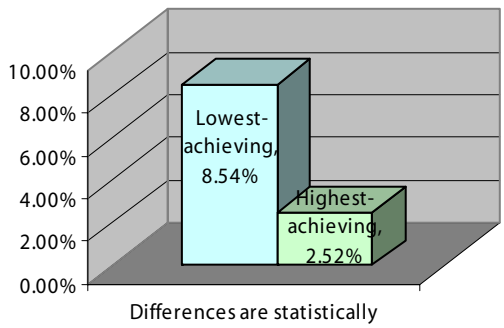
Differences are statistically significant at p ≤ .001

Figure 14. Percent student poverty (2003-4)



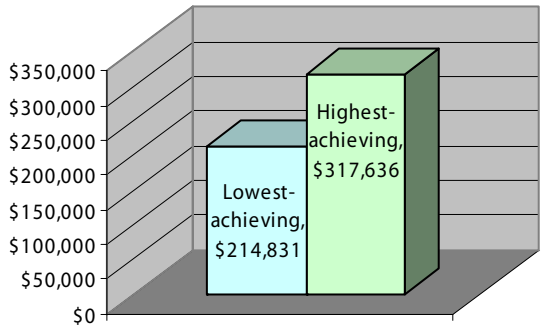
Differences are statistically significant at p ≤ .001

Figure 15. Percent migrant students (2003-4)



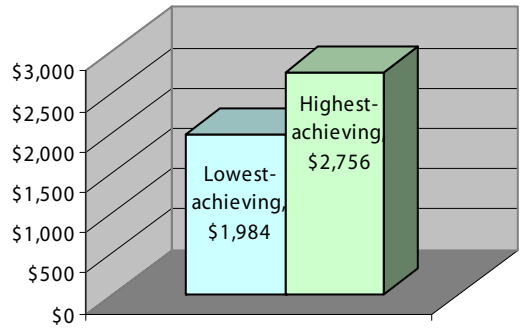
Differences are statistically significant at p ≤ .050

Figure 16. Local property valuation per pupil (2000)



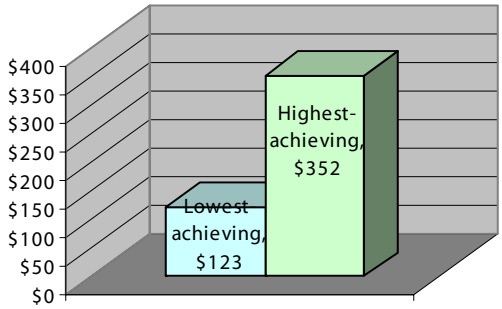
Differences are statistically significant at $p \leq .010$

Figure 17. Local revenue per pupil (2003-4)



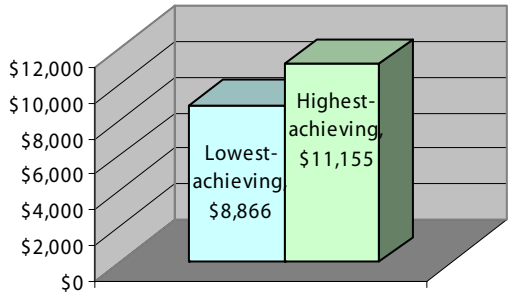
Differences are statistically significant at $p \leq .050$

Figure 18. County/ESD revenue per pupil (2003-4)



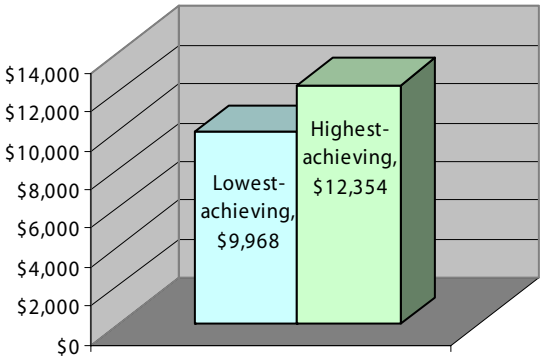
Differences are statistically significant at $p \leq .001$

Figure 19. Combined state and local revenue per pupil (2003-4)



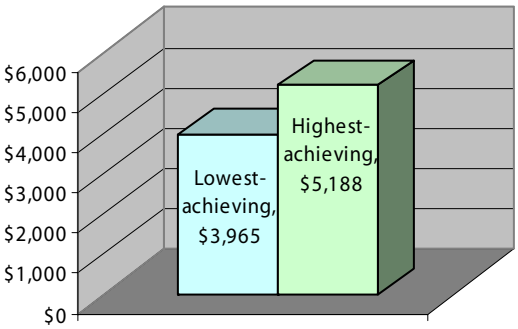
Differences are statistically significant at $p \leq .001$

Figure 20. Total revenue per pupil (2003-4)



Differences are statistically significant at $p \leq .001$

Figure 21. Direct classroom expenditures per pupil (2003-4)



Differences are statistically significant at $p \leq .001$

Figure 22.

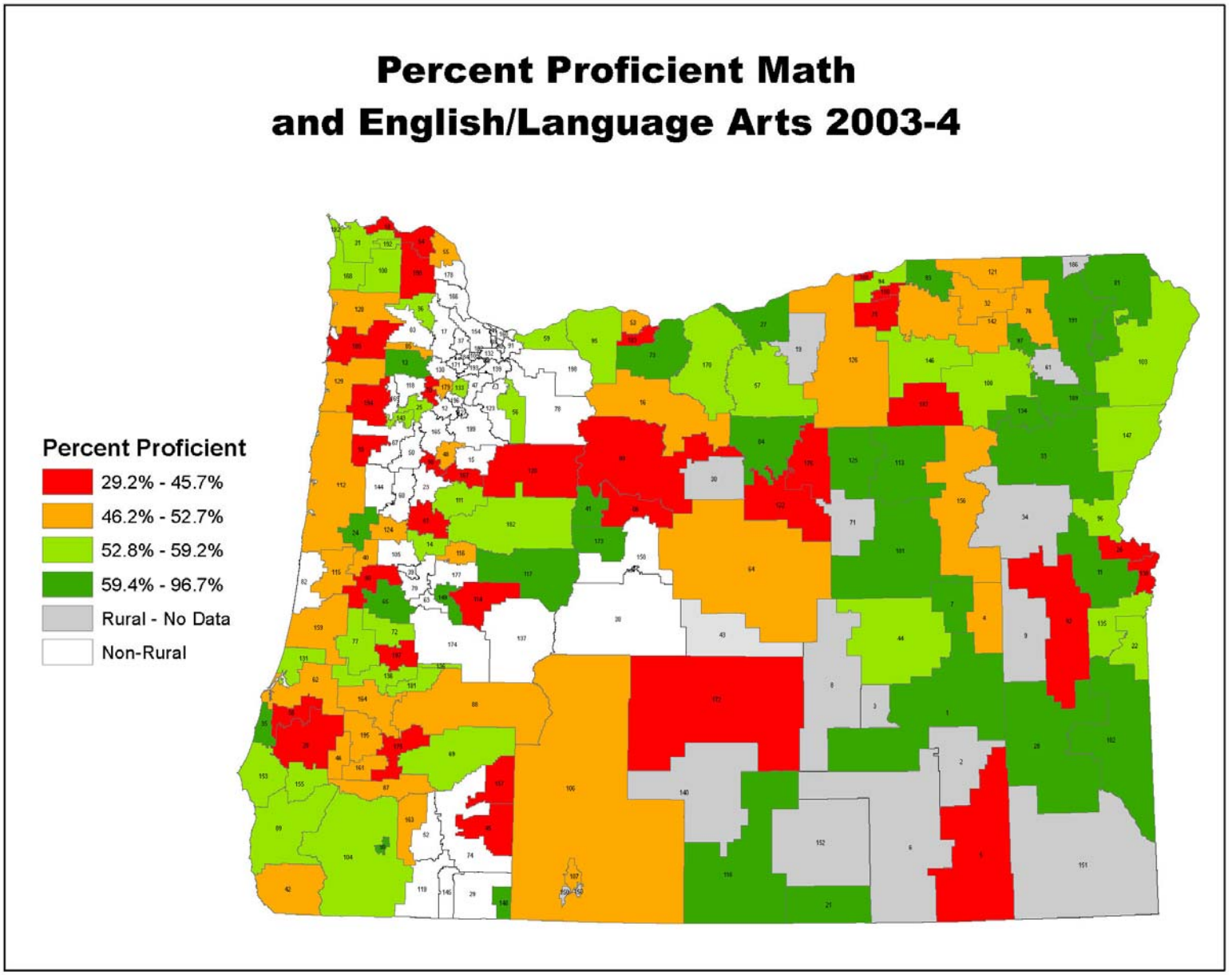

Percent Proficient Math
and English/Language Arts 2003-4
Percent Proficient
29.2% - 45.7%
46.2% - 52.7%
52.8% - 59.2%
59.4% - 96.7%
Rural - No Data
Non-Rural

Figure 23.

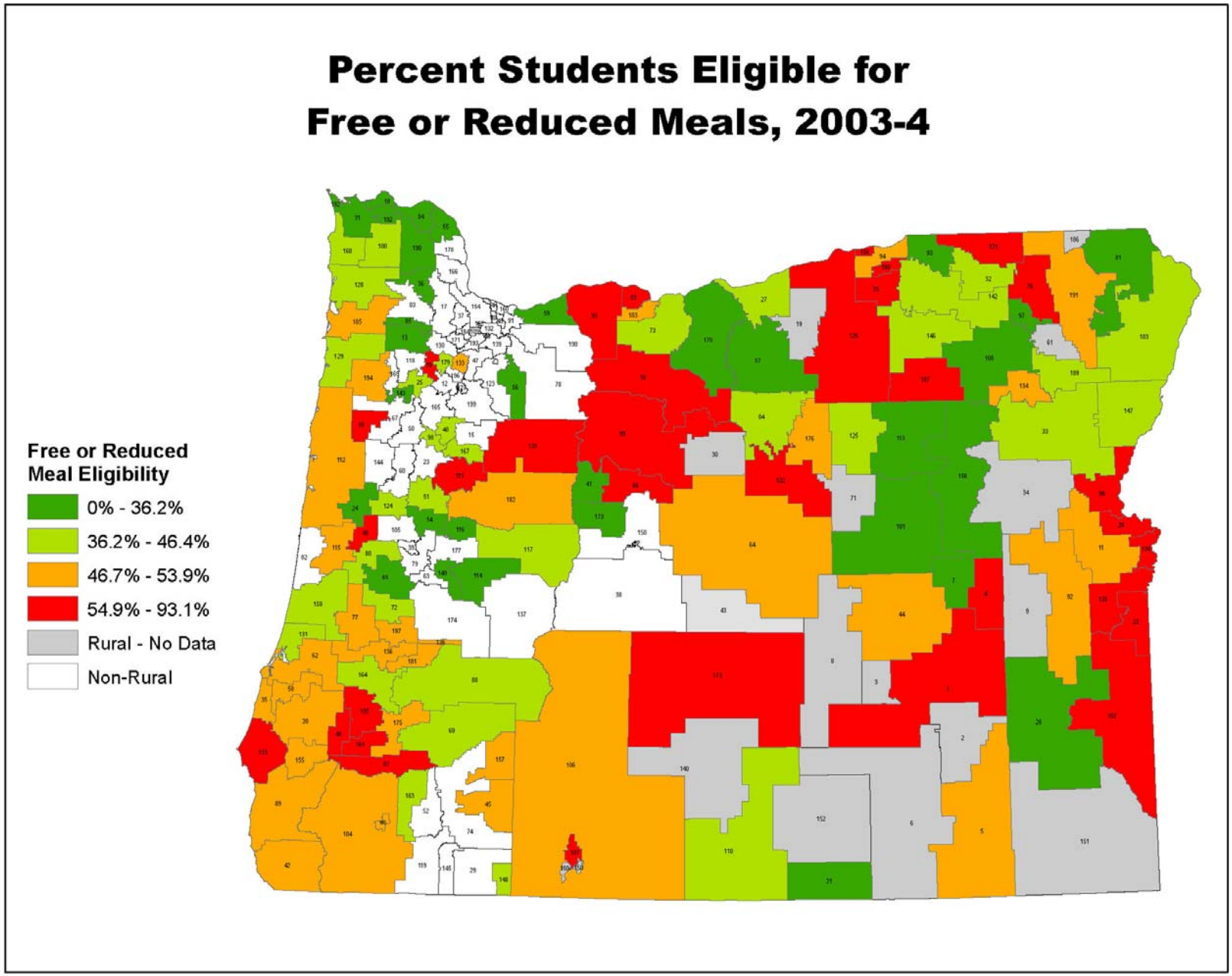

Percent Students Eligible for
Free or Reduced Meals, 2003-4
Free or Reduced
Meal Eligibility
0% - 36.2%
36.2% - 46.4%
46.7% - 53.9%
54.9% - 93.1%
Rural - No Data
Non-Rural

Figure 24.

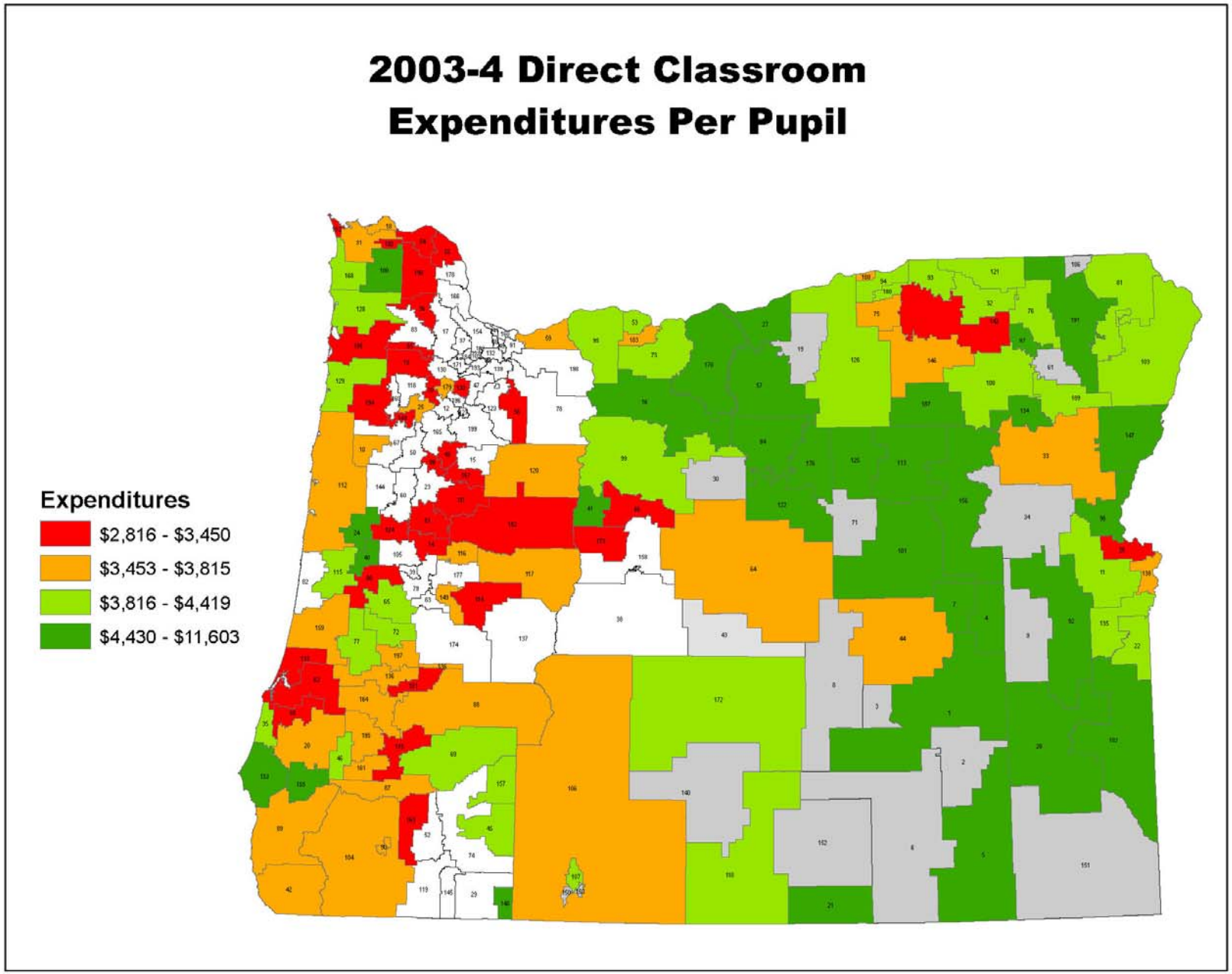
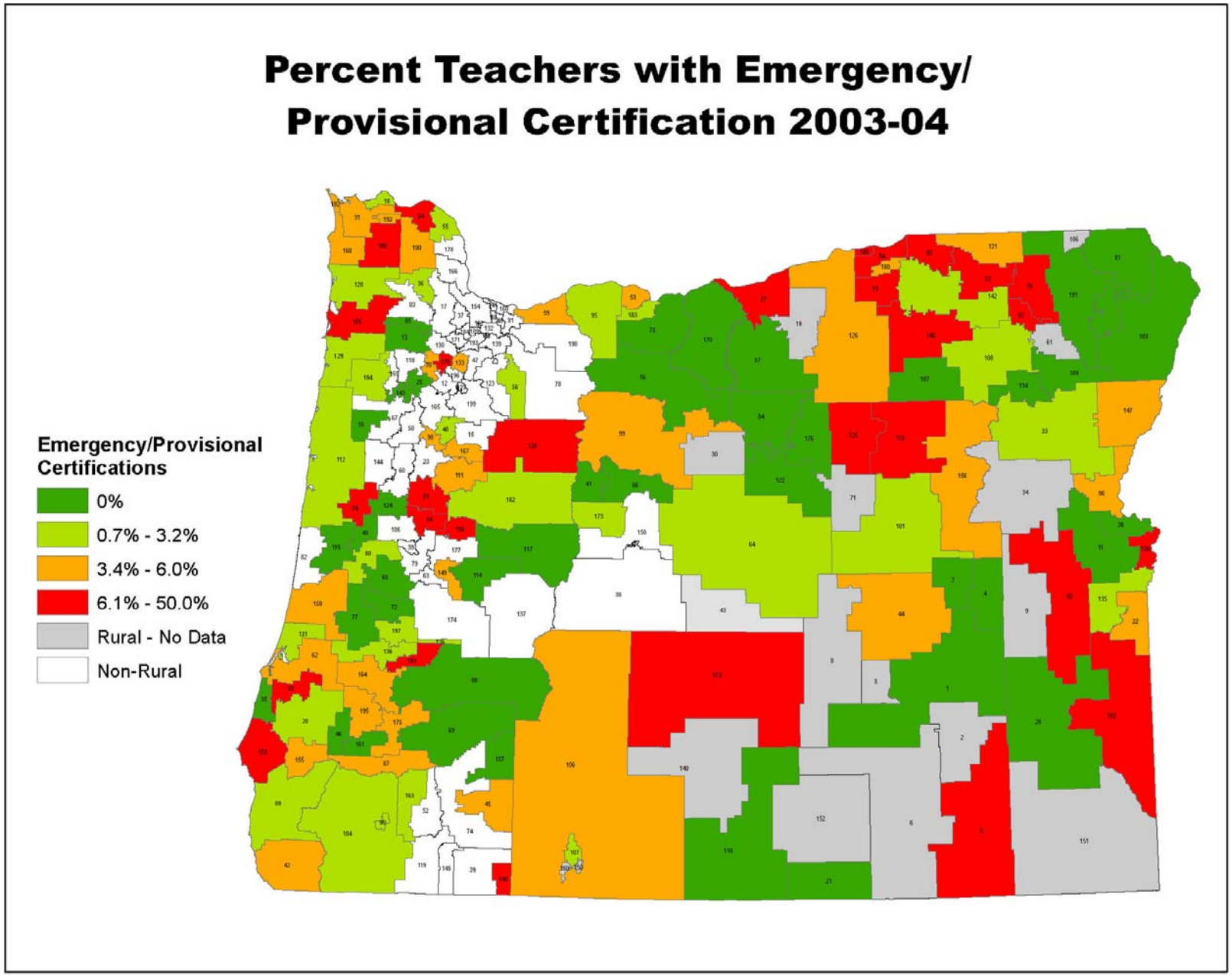

2003-4 Direct Classroom
Expenditures Per Pupil
Expenditures
$2,816 - $3,450
$3,453 - $3,815
$3,816 - $4,419
$4,430 - $11,603

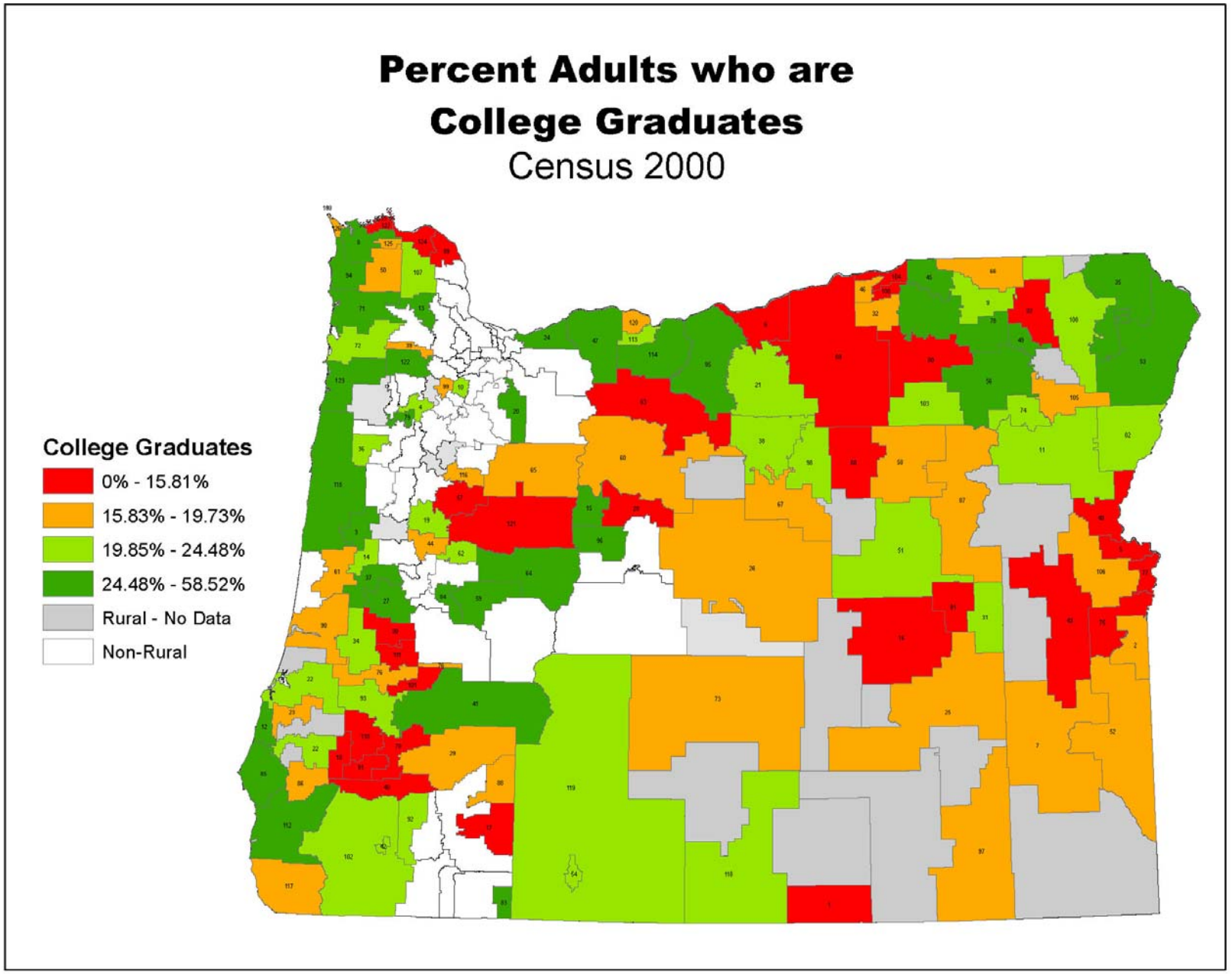
Figure 25.


Percent Teachers with Emergency/ Provisional Certification 2003-04
Emergency/Provisional Certifications
0%
0.7% - 3.2%
3.4% - 6.0%
6.1% - 50.0%
Rural - No Data
Non-Rural

Map Key - Districts

1 CRANE SCHOOL DISTRICT 4
2 DIAMOND SCHOOL DISTRICT 007
3 DOUBLE O SCHOOL DISTRICT 028
4 DREWSEY SCHOOL DISTRICT 013
5 SOUTH HARNEY SCHOOL DISTRICT 033
6 FRENCHGLEN SCHOOL DISTRICT 016
7 PINE CREEK SCHOOL DISTRICT 005
8 SUNTEX SCHOOL DISTRICT 010
9 JUNTURA SCHOOL DISTRICT 012
10 FALLS CITY SCHOOL DISTRICT 57
11 VALE SCHOOL DISTRICT 084
12 GERVAIS SCHOOL DISTRICT 001
13 YAMHILL-CARLTON SCHOOL DISTRICT 001
14 HARRISBURG SCHOOL DISTRICT 07J
15 NORTH SANTIAM SCHOOL DISTRICT 29J
16 SOUTH WASCO COUNTY SCHOOL DISTRICT 01
17 HILLSBORO SCHOOL DISTRICT 01J
18 KNAPPA SCHOOL DISTRICT 004
19 IONE SCHOOL DISTRICT 2
20 MYRTLE POINT SCHOOL DISTRICT 041
21 ADEL SCHOOL DISTRICT 021
22 ADRIAN SCHOOL DISTRICT 061
23 GREATER ALBANY SCHOOL DISTRICT 8J
24 ALSEA SCHOOL DISTRICT 07J
25 AMITY SCHOOL DISTRICT 04J
26 ANNEX SCHOOL DISTRICT 029
27 ARLINGTON SCHOOL DISTRICT 003
28 AROCK SCHOOL DISTRICT 081
29 ASHLAND SCHOOL DISTRICT 005
30 ASHWOOD SCHOOL DISTRICT 008
31 ASTORIA SCHOOL DISTRICT 001
32 ATHENA-WESTON SCHOOL DISTRICT 029J
33 BAKER SCHOOL DISTRICT 05J
34 BURNT RIVER SCHOOL DISTRICT 30J
35 BANDON SCHOOL DISTRICT 054
36 BANKS SCHOOL DISTRICT 013
37 BEAVERTON SCHOOL DISTRICT 48J
38 BEND-LaPINE ADMIN SCHOOL DISTRICT 1
39 BETHEL SCHOOL DISTRICT 052
40 BLACHLY SCHOOL DISTRICT 090
41 BLACK BUTTE SCHOOL DISTRICT 041
42 BROOKINGS-HARBOR SCHOOL DISTRICT 17
43 BROTHERS SCHOOL DISTRICT 015
44 HARNEY COUNTY SCHOOL DISTRICT 3
45 BUTTE FALLS SCHOOL DISTRICT 091
46 CAMAS VALLEY SCHOOL DISTRICT 021J
47 CANBY SCHOOL DISTRICT 086
48 CASCADE SCHOOL DISTRICT 005
49 CENTENNIAL SCHOOL DISTRICT 28J
50 CENTRAL SCHOOL DISTRICT 13J
61 CENTRAL LINN SCHOOL DISTRICT 552
62 CENTRAL POINT SCHOOL DISTRICT 006
63 CHENOWITH SCHOOL DISTRICT 009
64 COLUMBIA COUNTY SCHOOL DISTRICT 5J
65 COLUMBIA COUNTY SCHOOL DISTRICT 13
66 COLTON SCHOOL DISTRICT 053
67 CONDON SCHOOL DISTRICT 25J
68 COQUILLE SCHOOL DISTRICT 008
69 CORBETT SCHOOL DISTRICT 039
80 CORVALLIS SCHOOL DISTRICT 509J
81 COVE SCHOOL DISTRICT 015
82 COOS BAY SCHOOL DISTRICT 009
83 CRESWELL SCHOOL DISTRICT 040
84 CROOK COUNTY SCHOOL DISTRICT
85 CROW-APPLEGATE-LORANE SD 66
86 CULVER SCHOOL DISTRICT 004
87 DALLAS SCHOOL DISTRICT 2
88 DAVID DOUGLAS SCHOOL DISTRICT 40
89 DAYS CREEK SCHOOL DISTRICT 015
70 DAYTON SCHOOL DISTRICT 008
71 DAYVILLE SCHOOL DISTRICT 16J
72 NORTH DOUGLAS SCHOOL DISTRICT 022
73 DUFUR SCHOOL DISTRICT 029
74 EAGLE POINT SCHOOL DISTRICT 009
75 ECHO SCHOOL DISTRICT 005
76 ELGIN SCHOOL DISTRICT 023
77 ELKTON SCHOOL DISTRICT 034
78 ESTACADA SCHOOL DISTRICT 108
79 EUGENE SCHOOL DISTRICT 04J
80 FERN RIDGE SCHOOL DISTRICT 28J
81 ENTERPRISE SCHOOL DISTRICT 21
82 SIUSLAW SCHOOL DISTRICT 97J
83 FOREST GROVE SCHOOL DISTRICT 015
84 FOSSIL SCHOOL DISTRICT 21J
85 GASTON SCHOOL DISTRICT 511J
86 GLADSTONE SCHOOL DISTRICT 115
87 GLENDALE SCHOOL DISTRICT 077
88 GLIDE SCHOOL DISTRICT 012
89 CENTRAL CURRY SCHOOL DISTRICT 1
90 GRANTS PASS SCHOOL DISTRICT 007
91 GRESHAM-BARLOW SCHOOL DISTRICT 10J
92 HARPER SCHOOL DISTRICT 066
93 HELIX SCHOOL DISTRICT 001
94 HERMISTON SCHOOL DISTRICT 008
95 HOOD RIVER COUNTY SCHOOL DISTRICT 1
96 HUNTINGTON SCHOOL DISTRICT 16J
97 IMBLER SCHOOL DISTRICT 011
98 JEFFERSON SCHOOL DISTRICT 14J
99 JEFFERSON COUNTY SCHOOL DISTRICT 509J
100 JEWELL SCHOOL DISTRICT 008
101 JOHN DAY SCHOOL DISTRICT 003
102 JORDAN VALLEY SCHOOL DISTRICT 003
103 JOSEPH SCHOOL DISTRICT 006
104 THREE RIVERS SCHOOL DISTRICT
105 JUNCTION CITY SCHOOL DISTRICT 069
106 KLAMATH COUNTY SCHOOL DISTRICT
107 KLAMATH FALLS CITY SCHOOLS
108 LA GRANDE SCHOOL DISTRICT 001
109 LAKE OSWEGO SCHOOL DISTRICT 07J
110 LAKEVIEW SCHOOL DISTRICT 7
111 LEBANON COMMUNITY SCHOOL DISTRICT 009
112 LINCOLN COUNTY SCHOOL DISTRICT
113 LONG CREEK SCHOOL DISTRICT 017
114 LOWELL SCHOOL DISTRICT 071
115 MAPLETON SCHOOL DISTRICT 032
116 MARCOLA SCHOOL DISTRICT 079J
117 MCKENZIE SCHOOL DISTRICT 068
118 MCMINNVILLE SCHOOL DISTRICT 040
119 MEDFORD SCHOOL DISTRICT 549
120 SANTIAM CANYON SCHOOL DISTRICT 129J
121 MILTON-FREEWATER SCHOOL DISTRICT 007
122 MITCHELL SCHOOL DISTRICT 055
123 MOLALLA RIVER SCHOOL DISTRICT 035
124 MONROE SCHOOL DISTRICT 1J
125 MONUMENT SCHOOL DISTRICT 008
126 MORROW SCHOOL DISTRICT 001
127 MOUNT ANGEL SCHOOL DISTRICT 091
128 NEAH-KAH-NIE SCHOOL DISTRICT 56
129 NESTUCCA VALLEY SCHOOL DISTRICT 101J
130 NEWBERG SCHOOL DISTRICT 29J
131 NORTH BEND SCHOOL DISTRICT 013
132 NORTH CLACKAMAS SCHOOL DISTRICT 012
133 NORTH MARION SCHOOL DISTRICT 015
134 NORTH POWDER SCHOOL DISTRICT 08J
135 NYSSA SCHOOL DISTRICT 026
136 OAKLAND SCHOOL DISTRICT 001
137 OAKRIDGE SCHOOL DISTRICT 076
138 ONTARIO SCHOOL DISTRICT 008
139 OREGON CITY SCHOOL DISTRICT 062
140 PAISLEY SCHOOL DISTRICT 11
141 PARKROSE SCHOOL DISTRICT 003
142 PENDLETON SCHOOL DISTRICT 016
143 PERRYDALE SCHOOL DISTRICT 21
144 PHILOMATH SCHOOL DISTRICT 17J
145 PHOENIX-TALENT SCHOOL DISTRICT 004
146 PILOT ROCK SCHOOL DISTRICT 002
147 PINE-EAGLE SCHOOL DISTRICT 061
148 PINEHURST SCHOOL DISTRICT 094
149 PLEASANT HILL SCHOOL DISTRICT 001
150 KLAMATH COUNTY OVERLAP AREA
151 MCDERMITT SCHOOL DISTRICT 051
152 PLUSH SCHOOL DISTRICT 018
153 PORT ORFORD-LANGLOIS SCHOOL DISTRICT 2J
154 PORTLAND SCHOOL DISTRICT 1J
155 POWERS SCHOOL DISTRICT 031
156 PRAIRIE CITY SCHOOL DISTRICT 004
157 PROSPECT SCHOOL DISTRICT 059
158 REDMOND SCHOOL DISTRICT 02J
159 REEDSPORT SCHOOL DISTRICT 105
160 REYNOLDS SCHOOL DISTRICT 007
161 RIDDLE SCHOOL DISTRICT 070
162 RIVERDALE SCHOOL DISTRICT 51J
163 ROGUE RIVER SCHOOL DISTRICT 035
164 ROSEBURG SCHOOL DISTRICT 4
165 SALEM/KEIZER SCHOOL DISTRICT 24J
166 SCAPPOOSE SCHOOL DISTRICT 01J
167 SCIO SCHOOL DISTRICT 095
168 SEASIDE SCHOOL DISTRICT 010
169 SHERIDAN SCHOOL DISTRICT 48J
170 SHERMAN SCHOOL DISTRICT 001
171 SHERWOOD SCHOOL DISTRICT 88J
172 NORTH LAKE SCHOOL DISTRICT 014
173 SISTERS SCHOOL DISTRICT 006
174 SOUTH LANE SCHOOL DISTRICT 45J
175 SOUTH UMPQUA SCHOOL DISTRICT 019
176 SPRAY SCHOOL DISTRICT 001
177 SPRINGFIELD SCHOOL DISTRICT 019
178 ST HELENS SCHOOL DISTRICT 502
179 ST PAUL SCHOOL DISTRICT 045
180 STANFIELD SCHOOL DISTRICT 061
181 SUTHERLIN SCHOOL DISTRICT 130
182 SWEET HOME SCHOOL DISTRICT 055
183 THE DALLES SCHOOL DISTRICT 012
184 TIGARD-TUALATIN SCHOOL DISTRICT 23J
185 TILLAMOOK SCHOOL DISTRICT 9
186 TROY SCHOOL DISTRICT 054
187 UKIAH SCHOOL DISTRICT 080
188 UMATILLA SCHOOL DISTRICT 006
189 UNION SCHOOL DISTRICT 005
190 VERNONIA SCHOOL DISTRICT 47J
191 WALLOWA SCHOOL DISTRICT 012
192 WARRENTON-HAMMOND SCHOOL DISTRICT 30
193 WEST LINN SCHOOL DISTRICT 03J
194 WILLAMINA SCHOOL DISTRICT 30J
195 WINSTON-DILLARD SCHOOL DISTRICT 116
196 WOODBURN SCHOOL DISTRICT 103
197 YONCALLA SCHOOL DISTRICT 032
198 OREGON TRAIL SCHOOL DISTRICT 046
199 SILVER FALLS SCHOOL DISTRICT 4J

Figure 26.


Percent Adults who are
College Graduates
Census 2000
College Graduates
0% - 15.81%
15.83% - 19.73%
19.85% - 24.48%
24.48% - 58.52%
Rural - No Data
Non-Rural

Map Key – College Graduates

1 Adel SD
2 Adrian SD
3 Alsea SD
4 Amity SD
5 Annex SD
6 Arlington SD
7 Arock SD
8 Astoria SD
9 Athena-Weston SD
10 North Marion SD
11 Baker SD
12 Bandon SD
13 Banks SD
14 Blachly SD
15 Black Butte SD
16 Harney County SD
17 Butte Falls SD
18 Camas Valley SD
19 Central Linn SD
20 Colton SD
21 Condon SD
22 Coos Bay SD
23 Coquille SD
24 Corbett SD
25 Crane SD
26 Crook County SD
27 Crow-Applegate-Lorane SD
28 Culver SD
29 Days Creek SD
30 North Douglas SD
31 Drewsey SD
32 Echo SD
33 Elgin SD
34 Elkton SD
35 Enterprise SD
36 Falls City SD
37 Fern Ridge SD
38 Fossil SD
39 Gaston SD
40 Glendale SD
41 Glide SD
42 Grants Pass SD
43 Harper SD
44 Harrisburg SD
45 Helix SD
46 Hermiston SD
47 Hood River Co SD
48 Huntington SD
49 Imbler SD
50 Jewell SD
51 John Day SD
52 Jordan Valley SD
53 Joseph SD
54 Klamath Falls City Schools
55 Knappa SD
56 La Grande SD
57 Lebanon SD
58 Long Creek SD
59 Lowell SD
60 Jefferson County SD
61 Mapleton SD
62 Marcola SD
63 South Wasco County SD
64 McKenzie SD
65 Santiam Canyon SD
66 Milton-Freewater SD
67 Mitchell SD
68 Monument SD
69 Morrow County SD
70 South Umpqua SD
71 Neah-Kah-Nie SD
72 Tillamook SD
73 North Lake SD
74 North Powder SD
75 Nyssa SD
76 Oakland SD
77 Ontario SD
78 Pendleton SD
79 Perrydale SD
80 Pilot Rock SD
81 Pine Creek SD
82 Pine-Eagle SD
83 Pinehurst SD
84 Pleasant Hill SD
85 Port Orford-Langlois SD
86 Powers SD
87 Prairie City SD
88 Prospect SD
89 Rainier SD
90 Reedsport SD
91 Riddle SD
92 Rogue River SD
93 Roseburg SD
94 Seaside SD
95 Sherman SD
96 Sisters SD
97 South Harney SD
98 Spray SD
99 St Paul SD
100 Stanfield SD
101 Sutherlin SD
102 Three Rivers SD
103 Ukiah SD
104 Umatilla SD
105 Union SD
106 Vale SD
107 Vernonia SD
108 Wallowa SD
109 Warrenton-Hammond SD
110 Winston-Dillard SD
111 Yoncalla SD
112 Central Curry SD
113 The Dalles SD
114 Dufur SD
115 Lincoln County SD
116 Scio SD
117 Brookings-Harbor SD
118 Lakeview SD
119 Klamath County SD
120 Chenowith SD
121 Sweet Home SD
122 Yamhill-Carlton SD
123 Nestucca Valley SD
124 Clatskanie SD
125 Warrenton-Hammond SD
126 Warrenton-Hammond SD
127 Knappa SD