ABSTRACT

          This report examining at-risk youth uses information
from a regional database to illustrate the prevalence of at-risk
youth within and across the six northwest states (Alaska, Hawaii,
Idaho, Montana, Oregon, Washington). These analyses are presented to
illustrate the use of a database to aid state level decision-makers
in identifying the prevalence and distribution of students at-risk.
In the first section, "Who are the Children At-Risk in Today's
Schools?," risk indicators are categorized as background,
performance, or behavior characteristics. The second section, "How
Prevalent are the At-Risk Youth in the Northwest?," displays
prevalence on a state-by-state basis and gives regional summaries
against which individual states may be compared. Patterns of at-risk
students in school districts of varying size, rurality, and poverty
levels within states are illustrated. Two outcomes of risk, dropping
out of school and unemployment, are discussed and family background,
school achievement, and social behavior are examined as symptoms of
risk. The report concludes with a discussion of the stages of
database development, other potential uses, and a sampler of policy
implications of the information produced from the Northwest Regional
Educational Laboratory database. References, 13 tables, and 2 figures
are included. A detailed summary of the contents of the database is
appended (NB)

THE Northwest Regional Educational Laboratory

PROGRAM ▲ REPORT

Identifying At-Risk Youth in the Northwest States:
A Regional Database

By

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Identifying At-Risk Youth in the Northwest States:
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The purpose of the Database and School Profiling project at the Northwest Regional Educational Laboratory has been to assist states, local districts and schools in the development and use of information systems in policy and decision-making. Activities have included reports highlighting major issues and implementation options in the development and use of state and local databases; and handbooks with "how to do it" suggestions for collecting, displaying and interpreting data related to improvement at the school level. In addition, NWREL has modeled the development and use of a large database directed toward a policy issue of central concern to its constituency—the prevalence of at-risk youth in the Northwest region.

The regional database compiled by NWREL consists entirely of extant data from two basic sources. National data were acquired from the U.S. Census and Common Core of Data system available through the National Center for Statistics. These data have the advantage of common definitions and data collection methods across all states in the nation. Interstate comparisons may be made on indicators derived from these sources. They bear the limitation of age, however. Census data are now seven years old, while Common Core data are from three to seven years old. State-specific data were acquired from each of the six states in the Northwest and merged with the national data for each state. They have the advantage of both recency and relevance to their states, but can complicate and even preclude interstate comparisons. Few of the state-specific data elements are collected by all or even most states and those that are suffer from differences in definition, unit of data collection, etc.

In the NWREL database, data from all of these sources are aggregated to or presented as district level totals, averages and percentages. There are indicators of student and family background, economic and employment status, social behavior and academic achievement. A more detailed summary of the contents of the database is given in Appendix A of this report.

In this report, we rely on a rich and current literature addressing the fundamental question of "who is at risk?" We adopt a fairly broad characterization of these children, and utilize the information in our regional database to illustrate their prevalence within and across the six Northwest states. In all, over a dozen indicators of risk are portrayed in this report. The purpose in presenting these analyses is to illustrate one important way a database can be used—to aid state level decision-makers in identifying the prevalence and distribution of students at risk. We close the report with discussion of the stages of database development, other potential uses, and a sampler of policy implications of the information produced from the NWREL database.

Who are the Children At-Risk in Today's Schools?

As we begin to discuss the prevalence and needs of at-risk youth in the region, let's start with what we mean by "at-risk"; that is, at-risk of *what*? Traditionally, the focus of concern has been on students dropping out of school. More recently, the Business Advisory Commission of the Education Commission of the States (ECS) has extended the concept of risk to one of "not making successful transitions to productive adult lives"

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(p. 8). The authors point out that, in addition to the obvious costs to society of adults who do not participate productively in the work force, the demographics of the nation indicate that the problem is getting progressively worse. In 1950, there were 17 adults in the work force for every retiree drawing a pension. By 1992, there will be only 3. By the year 2000, there will be a 1 to 1 correspondence between those in the work force and those drawing pensions. Clearly, the need to identify and work with children in today's schools, who are at risk of not joining this ever-dwindling work force, is a pressing national problem.

Recent research has given us clues in the identification of these children. Longitudinal studies have determined the characteristics and behaviors of children who eventually drop out of school, remain unemployed for long periods of time, or require extended social supportive services. These indicators generally fall into three categories. *Background Characteristics* of these students can help identify those children bearing greater risks of failure than others. These characteristics usually are the environmental circumstances that these children have been born into that they can do nothing about. Conditions of poverty, family structure, and ethnic origin are examples of these. *School Performance* is another important consideration. These include academic indicators such as test scores and grade point average, but are not confined to these traditional outcomes. Attendance rates, instances of disciplinary referrals and suspensions, and participation in school activities are other members of this category. Finally *Social Behaviors* both within and outside of the school environment are also important. These include incidence of criminal behavior and delinquency, drug and alcohol use and attitudes toward school.

There is a rich and current literature tracking the effects of risk indicators such as these. A list of them, classified in the three categories mentioned above, and their citations in the Reference section of this report is given in Table 1.

Table 1

Indicators of At-Risk Youth
Cited in Current Literature

Category	Indicator	Citations*
Background Characteristics	Single Parent Family	1,9
	Teenage Mother	1,3,5,9
	Youth Employment	1,5
	Ethnic Origin	2,3,5,7,8,9
	Poverty status	4,5,8,9
	Limited English Speaking	2,5,9
	Parents Education	4,6
	Low Birth Weight	9
	Latch Key Children	9
School Performance	Low Grades	1,2,10
	Low Test Scores	1,2,3,4
	Learning Disabled	5
	Illiteracy	8
	Attendance, Tardiness	2,4,5,10
	Suspension, Expulsion	1,10
	Remedial or Vocational Track	2
	Participation in School Activities	2
Social Behavior	Drug/Alcohol Abuse	5
	Arrests	5
	Suicide Attempts	5
	Self Esteem	2,4
	Attitudes toward School	2,4,5
	Effort in School	2,4

* Citations as numbered in the Reference section of this report

These indicators of risk effectively demonstrate the scope and breadth of the problem facing today's schools and society in general. The list in Table 1 is not meant to be exhaustive, nor is our three-category structure meant to be fixed or limiting. Those who would argue that school suspensions and expulsions belong to the Social Behavior category rather than the School Performance category have our blessing. Our contention is simply that all of these indicators are important manifestations of children at risk.

In the next section of this report, we will show the prevalence of at-risk students

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in the Northwest, using many of the indicators shown in Table 1. Results of our analyses will be displayed on a state by state basis, along with regional summaries against which individual states may be compared. Further, we will display the patterns of at-risk students in school districts of varying size, rurality and poverty levels within individual states.

These analyses and displays are intended to exemplify the kinds of information and results obtainable from a regional database designed with this particular issue in mind. They are not meant to be exhaustive, but only illustrative of the information yield from a data-based approach to addressing an important policy issue.

How Prevalent are the At-Risk Youth in the Northwest?

In depicting the status of at-risk youth in the Northwest, there are indicators which research and experience tell us lead to student alienation from the schooling process and others which are the outcomes of this alienation. Dropping out of school and not becoming productive members of society are most certainly the outcomes policies and programs seek to avoid. Educators stress the importance of identifying the students who appear to be heading down these paths as early as possible. Consequently, the symptoms of failure are another important category of risk indicators to attend to. A data-based approach to identifying both the symptoms and the outcomes of "disconnection" from the educational system is represented by sample analyses in this section of our report.

Outcomes of Risk: Dropping out of school and unemployment

Failure to complete high school has traditionally been the most serious outcome of concern to schools, districts and states across the nation. National statistics tell us that one in four young people in this country does not graduate from high school. In some large, urban areas, dropout rates are much higher. In New York City in 1984, 40% of the students failed to graduate; in Los Angeles in the same year the percentage was 55%. But dropping out of school is not solely an urban school problem, as data we present for the Northwest states shows.

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Table 2

Dropout Rates for 16 to 19 year old students
in the Six Northwest States

State	Total No. Districts with High Schools	16-19 yr. Persons in these Districts	No. of Students Dropping Out	Percent of Students Dropping Out
Alaska	50	29,734	3,687	12.2%
Hawaii	7	69,052	5,178	7.5%
Idaho	106	71,512	11,370	15.9%
Montana	163	60,652	6,550	10.8%
Oregon	180	181,287	27,193	15.0%
Washington	244	295,084	40,722	13.8%
Regional Total	750	707,321	94,700	13.4%

The number of districts containing high schools and the number of students enrolled in these districts are shown in Table 2 for all six Northwest states. The number and percent of persons in the district who are 16 to 19 years old and who are neither attending school nor graduated are shown as "dropouts" in the table. Region-wide, there is nearly a 14% dropout rate, although this varies considerably across states—from a low of 7.5% in Hawaii to 15% and more in Oregon and Idaho. While these averages appear considerably lower than those often cited for the nation as a whole, Census data does not classify individuals who have obtained a high school equivalency by other means (e.g. GED, or community college continuation programs) as dropouts.

State-wide totals such as these give a general picture of the magnitude of the problem in each of the Northwest states, but do not give much guidance as to where the higher incidence are within each state. State policy makers may want to know if the state-wide average is fairly typical for all districts. If not, and considerable variability does exist, where are the high incidence areas? Do certain types of districts suffer this problem more than others? Is it the large, urban districts which lose a higher proportion of their high school students or do small rural schools have an equally difficult time?

Using descriptors of district size and rurality, these dropout figures can be compared within each of the Northwest states. For illustrative purposes, these patterns are presented for two states in Table 3.

Table 3

Average Dropout Rates in Districts of Different Size and Rurality

Size/Rurality	Number of Districts with High Schools	16-19 yr olds in these Districts	No. 16-19 yr olds Dropping Out	% of 16-19 yr olds Dropping Out
Idaho				
Very Small rural	63	9,477	1,516	16.0%
Small Rural	11	5,319	808	15.2%
Large Rural	2	2,530	425	16.8%
Small Not Rural	15	7,673	1,373	17.9%
Large Not Rural	19	35,530	5,223	14.7%
Very Lge Not Rural	1	8,984	1,159	12.9%
Oregon				
Very Small Rural	79	11,471	1,537	13.4%
Small Rural	15	8,112	1,331	16.4%
Large Rural	5	7,011	1,325	18.9%
Small Not Rural	28	16,357	2,895	17.7%
Large Not Rural	45	91,441	13,991	15.3%
Very Lge Not Rural	3	43,886	6,978	15.9%

Very Small= Fewer than 1,000 students
Small= Between 1,000 and 2,500 students
Large= Between 2,500 and 20,000 students
Very Large= More than 20,000 students

Rural= More than 75% of the children living in rural settings
Not Rural= Less than 75% of the children living in rural settings

The dropout data presented for Idaho and Oregon suggest that this problem is not confined to large, urban districts. In Idaho, the one district which falls in our "very large" category has the lowest percent of 16-19 year old students dropping out of high schools of any of the six district size and rurality categories—only 13%. In Idaho, the largest _number_ of students dropping out are found in those districts with 2,500 to 20,000 students located in non-rural settings, although their _percent_ of students dropping out is lower than most other size/rurality categories of districts. Oregon's largest number of students dropping out are also in the "large, urban" districts—nearly 14,000 of them,—although in terms of percent of children, these districts are near the state-wide average. The small and large rural districts in Oregon possess the largest percentages of students dropping out of high school, well above state-wide averages of 15%.

Knowing how dropout rates within a state vary with district size and rurality is helpful in identifying patterns of this problem in districts of similar characteristics. Even these patterns limited information, however, when determined solely on the basis

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of group averages. While the breakdown in dropout rates by district size and rurality shown in Table 3 is more informative than a simple state-wide average, there still may be important variations within these groups. With all data in the NWREL database available at the individual district level, it is straightforward to display the distribution of these indicators within these district groupings. These variations in Idaho and Oregon are shown in Table 4.

Table 4

Range of Dropout Rates within Districts of
Similar Size and Rurality in Idaho and Oregon

Size/Rurality	10% or Less	11% to 20%	21% to 30%	31% to 40%	41% to 50%	51% or More
Idaho						
Very Small Rural	24	21	13	3	0	2
Small Rural	0	11	0	0	0	0
Large Rural	0	2	0	0	0	0
Small Not Rural	0	9	6	0	0	0
Large Not Rural	4	11	4	0	0	0
V Lge Not Rural	0	1	0	0	0	0
Oregon						
Very Small Rural	25	41	10	2	1	0
Small Rural	0	13	2	0	0	0
Large Rural	0	4	1	0	0	0
Small Not Rural	5	12	10	1	0	0
Large Not Rural	7	33	5	0	0	0
V Lge Not Rural	1	1	1	0	0	0

Very Small =	Fewer than 1,000 students
Small =	Between 1,000 and 2,500 students
Large =	Between 2,500 and 20,000 students
Very Large =	More than 20,000 students
Rural =	More than 75% of the children living in rural settings
Not Rural =	Less than 75% of the children living in rural settings

The data in Table 4 show the widest range of dropout rates in the very small, rural districts in both states. In Idaho, the 63 very small rural districts range from 0 to 63% of their 16-19 year olds dropping out of school. Their counterparts in Oregon range from 0 to 48% dropout rates. No other categories of districts come close to matching this variability. Large, non rural districts, many of which are essentially suburban, are the next largest group, ranging from 5% to 30% dropout rates.

In seeing the range of dropout rates among districts of similar characteristics, the

state-wide picture can be more fully understood. The group averages in Table 3 might suggest that there are only small differences in the extent of the dropout problem between small and very small rural districts in Idaho—their average dropout rates differ by less than 1%. The distribution in Table 4 tells us, however, that the very small rural districts range from 0 to 63% dropout rate, while all the small rural districts have between 11% and 20% dropout rates. Obviously, these two categories of districts are not as similar as their averages would suggest.

These examples show the variability in patterns of dropouts both within and across the Northwest states. The target of state assistance to districts with at-risk children will be different in Idaho than it will be in Oregon. Clearly, the notion that the largest, urban districts in a state comprise the most serious incidence of these problems is not the case in either Idaho or Oregon. Policy makers and state administrators can use data like these to identify those types of districts having the most serious needs.

Having identified how many students are dropping out, and in which types of districts, we look more closely at whether these children have left school but are on their way to becoming useful, productive members of society or are languishing in their "disconnection" from school. The NWREL database contains information on the employment status of 16-19 year olds who are neither in school nor graduated. Three aspects of employment status are shown in Table 5 and the accompanying figure for the entire region. First, the percent of all 16-19 year old dropouts who are employed is shown. Secondly, the percent of these dropouts who are unemployed, but looking for work is given. Finally, the percent of dropouts who are unemployed and not looking for work completes the table.

Table 5

Number (%) of Districts with Varying
Percents of 16-19 year old Dropouts who are
Employed, Unemployed and Looking for Work,
and Unemployed and Not Looking for Work

Percent of Dropouts	Employed		Unemployed Looking		Unemployed Not Looking	
0 to 10%	125	(15.%)	367	(44.%)	92	(11.%)
11% to 20%	61	(7.%)	211	(25.%)	47	(6.%)
21% to 30%	110	(13.%)	140	(17.%)	93	(11.%)
31% to 40%	127	(15.%)	60	(7.%)	158	(19.%)
41% to 50%	136	(16.%)	22	(3.%)	131	(16.%)
51% to 60%	101	(12.%)	16	(2.%)	110	(13.%)
61% to 70%	71	(9.%)	7	(1.%)	60	(7.%)
71% to 80%	29	(4.%)	3	(<1.%)	46	(5.%)
81% to 90%	24	(3.%)	0		30	(4.%)
91% to 100%	54	(6.%)	12	(1.%)	71	(8.%)
TOTAL Dists	838	(100.%)	838	(100.%)	838	(100.%)

The information in Table 5 show dramatically different patterns of employment/unemployment status in districts across the Northwest states. The percent of dropouts who are employed in these districts varies widely and fairly evenly across the region. There are as many districts that have low percentages of their dropouts employed as there are districts who have high dropout employment rates. About 22% of the Northwest districts have less than 20% employment rates, while the same number of districts employ more than 60% of their 16 to 19 year olds who have left school. This wide range is not the case for the unemployed categories. Most districts have few of their dropouts unemployed and looking for work, and larger percentages unemployed and not looking for work. The last group is one of great concern for policy-makers. These are the young people who have dropped out of school and are not part of the labor force, either by choice, through teenage pregnancy or parenthood, or a physical or mental disability.

The figure on page 10 presents these district-wide percentages of the two unemployment categories in a cumulative fashion across the region. This display clearly shows the differing trends in the number of districts facing varying rates of unemployment among their dropout populations. As noted earlier, most districts have small percentages of their unemployed dropouts looking for work, while the percentages not looking for work is more evenly distributed among the districts. The employment rate is also shown cumulatively on the transparency overlay to the figure. It too shows a gradual rise across all the districts in the Northwest, likely reflecting differing economic conditions and opportunities in various locations in the region. Interestingly, higher employment rates among 16-19 year olds are associated with higher dropout rates in this age group. Perhaps greater opportunities for youth employment are a disincentive to staying in school in many of our communities. Or perhaps the economic needs of some areas require their young people to leave school before graduation to join the work force. The validity of these explanations cannot be fully tested here, but the importance of the employment/unemployment rates of 16-19 year olds is firmly established. Correlational analyses conducted on these data showed employment to be the strongest predictor of dropout rates across all districts in the region.

SCHOOL DISTRICTS AND DROPOUTS
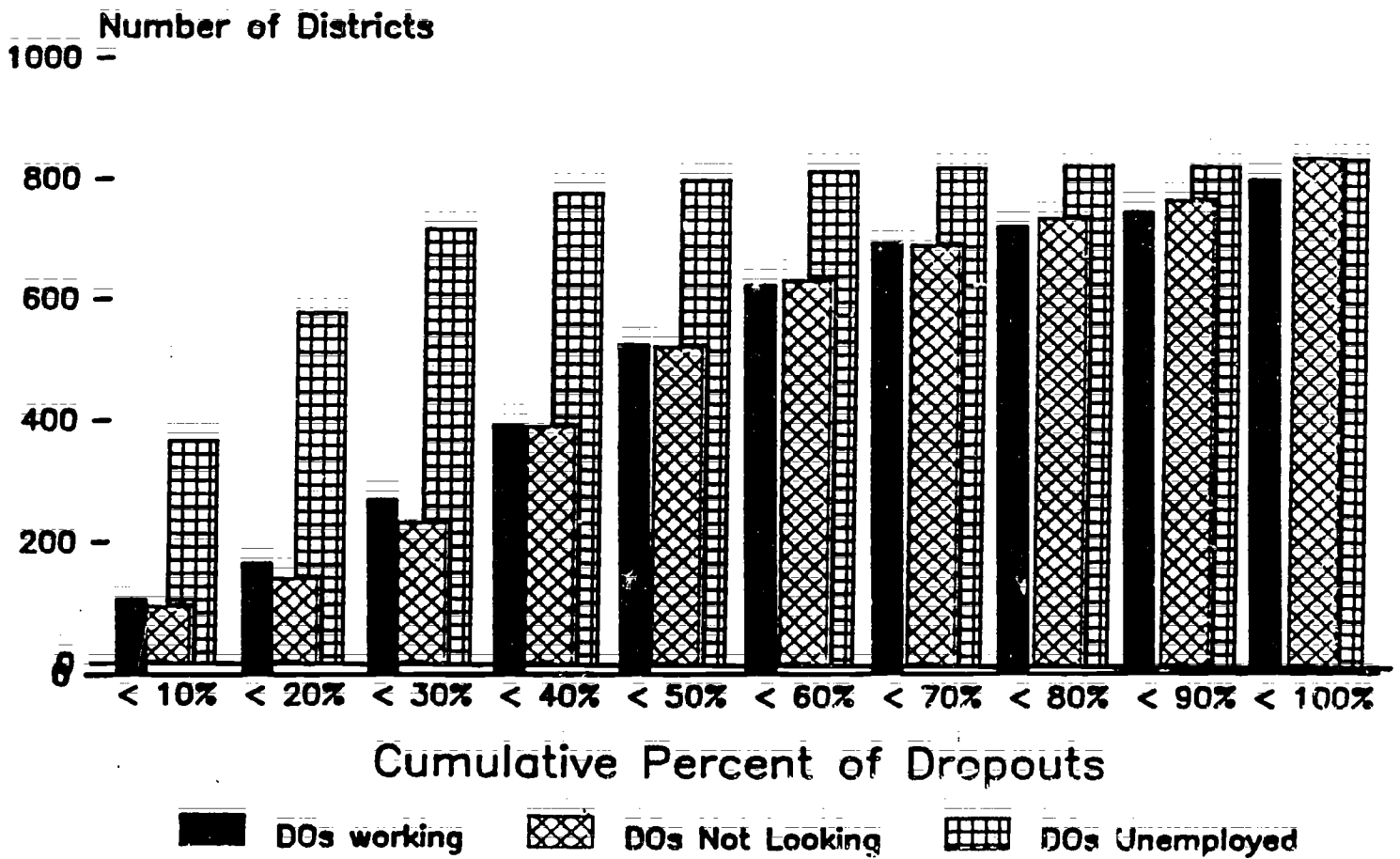## LABOR FORCE PARTICIPATION

Number of Districts

Cumulative Percent of Dropouts

■ DOs working   ▨ DOs Not Looking   ▦ DOs Unemployed

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Table 6

Employment Status of 16-19 year old Students
who have Dropped Out of School

State	No. of 16-19 yr old Persons	No. of 16-19 yr old Dropouts	No.(%) of Dropouts who are Working		No.(%) of Dropouts who are Unemployed	
Alaska	29,734	3,687	1,219	(4.1%)	2,468	(8.3%)
Hawaii	69,052	5,178	1,864	(2.7%)	3,314	(4.8%)
Idaho	71,512	11,370	4,934	(6.9%)	6,436	(9.0%)
Montana	60,652	6,550	2,608	(4.3%)	3,942	(6.5%)
Oregon	181,287	27,193	11,240	(6.2%)	15,953	(8.8%)
Washington	295,084	40,722	16,820	(5.7%)	23,902	(8.1%)
NW Total	707,321	94,700	38,685	(5.5%)	56,015	(7.9%)

In Table 6, we present a state by state picture of the proportions of 16 to 19 year old dropouts who are working and those who are not working. In every state, the majority of students who have dropped out of school are not working. The highest employment rate among these former students is in Idaho, where nearly 7% of 16 to 19 year olds have dropped out of school and are working. Still, given Idaho's nearly 16% dropout rate, there is an even higher percentage of dropouts who are not in the work force. State-wide totals for Oregon (15,953 unemployed dropouts) are nearly matched by city-wide totals in Chicago, where, in a recent USA Today report, economists estimated that its 13,000 high school dropouts would cost taxpayers $60 million a year for the next 40 years. Projecting this estimate on the state of Oregon yields a prospect of over $73 million per year, and nearly $3 billion over the entire lifetime of this group!

Symptoms of Risk: Family Background, School Achievement and Social Behavior

Students dropping out of school and not becoming productive members of the work force represent the true casualties of the "at-risk" condition in our educational system today. Efforts at identifying these students begin early. As shown earlier in this report, aspects of children's background have been shown to be related to subsequent alienation and dropping out of school. School performance and social behavior can also help identify students at risk long before dropping out actually occurs.

Guided by the literature and the experiences of Northwest educators, data gathered for the regional database included information on a variety of indicators associated with later risk of dropping out of school. In this section we will present results of analyses on indicators of family poverty, student achievement, attendance and disciplinary referrals.

Students who come from an economically disadvantaged home environment are one of the more often targeted groups for special assistance. Table 7 displays information on the number and percent of families and children living below the poverty level, according to 1980 US census tallies, in the six Northwest states.

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Table 7

Rates and Numbers of Families and Children
Living in Poverty in six Northwest States

State	No. of School Districts	No.(%) of Families w/Children in Poverty	No.(%) of Children in Poverty
Alaska	52	6,755(15.4%)	15,445 (15.9%)
Hawaii	7	40,719(12.0%)	98,156 (13.8%)
Idaho	115	17,496(15.1%)	43,066 (17.4%)
Montana	554	27,723(17.1%)	62,984 (19.5%)
Oregon	312	44,067(11.8%)	92,848 (13.6%)
Washington	299	59,966(12.2%)	127,758 (13.7%)
NW Total	1,437	196,726	415,257

Average poverty concentrations in school districts in the Northwest vary somewhat by state, ranging from about 12% to 17% of families and about 14% to nearly 20% of children. Montana is highest in both areas, while Hawaii and Washington are lowest. A look at the distribution of poverty in school districts of varying size and rurality in these states again offers rather startling contrasts not visible in state-wide summaries alone. In table 8, these data are presented for the state of Alaska.

Table 8

Rates and Numbers of Families and Children
Living in Poverty in Alaska

Alaska	No. of Districts	No.(%) of Families w/Children in Poverty	No. (%) of Children in Poverty
Very Small Rural	36	1,179 (16.0%)	2,754 (16.1%)
Small Rural	4	745 (28.2%)	2,333 (31.4%)
Large Rural	2	793 (11.2%)	1,942 (13.6%)
Small Not Rural	6	373 (6.3%)	774 (6.6%)
Large Not Rural	3	1,470 (14.5%)	3,218 (15.1%)
Very Lge Nt Rural	1	2,195 (7.6%)	4,424 (8.3%)
TOTAL		6,755	15,445

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Although the greatest number of families and children living in poverty in Alaska come from the one district fitting our "very large" category, the poverty rate there is well below the state-wide average of fifteen to sixteen percent. The "pockets" of poverty in Alaska's districts are found in the small, rural districts where about 30% of the families and children live in this condition—nearly double the state-wide average. These four rural districts, ranging in size from 1,000 to 2,500 students, present substantially greater poverty than the 36 rural districts which are even smaller. Similarly, they are much more poor than their "not rural" counterparts. The six districts of the same size which are not classified as rural have only six to seven percent of their families and children living below the poverty level—again, well below the state-wide average. State decision-makers and their constituents in Alaska are more familiar with the demographics of their communities than are the authors of this report. Once identified, these districts can become the focus of attention and assistance. Without aid of a district-level database, however, the stark contrast among districts within a state could easily go undetected.

Another family-related characteristic shown to be related to high school students failing to graduate is the educational attainment of the adults in their family and the community in general. Using Census information, the cross-generational history of dropping out of school can be traced. In Table 9, the current (actually, 1980) percent of dropouts is shown in relation to the percent of adults aged 25 and older who did not complete eighth grade, and who started, but did not complete high school.

Table 9

Dropout Rates for 16-19 year olds
and Adults Over 25 in six Northwest States

State	Percent of 16-19 yr old Dropouts	Percent of Adults With no High School	Percent of Adults not Finishing High School	Total Dropout Adult
Alaska	12.2%	19.1%	11.3%	30.4%
Hawaii	7.5%	18.1%	10.4%	28.5%
Idaho	15.9%	14.6%	15.0%	29.6%
Montana	10.8%	17.0%	12.1%	29.1%
Oregon	15.0%	14.0%	15.0%	29.0%
Washington	13.8%	13.0%	13.9%	26.9%

Results in table 9 show the adult community has about twice the rate of persons who had not completed high school than in the current group of 16 to 19 year olds. In Montana and Hawaii, the differences are even greater—three to four times as many adults did not complete high school. It must be noted that this adult segment of the population includes more than just the generation of parents of current high school students. It also includes their grandparents. This is true for all the states, however, and would not necessarily confound any comparisons among them.

Regression analyses we conducted showed the educational attainment of the adults

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residing in the district to be highly related to the dropout rate of current students there. The strength of this relationship exceeded that of family poverty, rurality, and other indicators traditionally thought to be strong predictors of high school dropout rate. Again, the relationship was assessed within each state using districts as the units of analysis. Table 10 summarizes the association of "adult dropout rate" with that of 16-19 year olds in the same districts throughout the state of Idaho.

Table 10

A Cross-Tabulation of Dropout Rates
for 16-19 year olds and Adult Over 25
in 113 School Districts in Idaho

Percent 16-19 yr olds not Finishing High School	Percent Adults Not Finishing High School			
	Less than 25%	25% to 33%	More than 33%	TOTAL
More than 20%	1	8	19	28
10% to 20%	17	29	12	58
Less than 10%	12	14	1	27
TOTAL	30	51	32	113

The percentage categories used in Table 10 were designed to represent high, medium and low dropout rates for 16-19 year olds and adults. There have been such dramatic changes in these rates across the generations, however, that vastly different standards apply. "High" and "Low" categories shown in the table define the approximately 25% highest and lowest districts for each population. "Medium" districts are the remaining 50% falling between these extremes. The improvement in the percent of today's students finishing high school compared to that of adults in these Idaho communities can be seen by the dramatically different standards for these two groups. The cutoff which defines the highest dropout rates in 1980 (more than 20% of the students in the district) is slightly less than the cutoff which defined the lowest dropout rates among adults over 25 years old (less than 25% of the adults in the district).

The relationship between the dropout rates across generations in Idaho is shown by the large number of districts which have maintained consistently high, medium or low dropout rates through the years. For example, of the 32 districts showing the highest dropout rates among their adult population, 19 of these (over 60%) continue to have among the highest dropout rates in the state. This indicates that current dropout rates among 16-19 year olds are related to the level of educational attainment of the adults in the community. This may suggest community norms which guide expectations as to

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adults in the community. This may suggest community norms which guide expectations as to whether children should finish school, or economic conditions which persist across generations and affect children's opportunities to stay in school. The analysis in Table 10 also identifies those districts which are exceptions to the rule. For example, one district which has among the highest dropout rates among its adults is in the lowest category of dropout among 16-19 year olds. There may be some very positive and constructive local initiatives toward improving graduation rates in that particular district from which other districts could benefit. These explanations are not without support, both in the literature and in the field, but a test of their validity goes well beyond the information contained in these data alone. Again, however, the existence of this relationship can aid educational decision-makers as they attempt to identify districts or areas which may contain larger numbers or rates of students at risk of not completing their high school education.

The relationship between dropout rates of adults and youth in the same district can be displayed geographically using a state map with district-level boundaries represented. The correspondence of dropout rates across generations indicated in Table 10 is depicted in the figure on page 16, where the "high adult dropout rate" districts are shaded, and the high 16-19 yr old dropout districts are corss-shaed on a transparency. Among the adults, the Southwest and South Central portions of the state contain the highest frequency of adults who did not finish high school. By overlaying the youth dropout rates, we can see they are highest in a many of the same districts in the southern portion, along with a few in the Northwest corner of the state. Visually, one can see the geographic locations of districts in the state with the highest dropout rates.

In addition to family educational background, performance in school contributes to a student's likelihood of completing their education and becoming productive members of the work force. Academic performance is certainly a potent indicator—low achieving students are far more likely to drop out before completing high school. Other indicators such as attendance rates, and participation in school activities are associated with dropout rates in the expected direction. That is, the more engaged in school activities a student is, the less likely he/she is of dropping out.

Data regarding school performance are typically not available in uniform, national databases such as the U.S. Census. Those that do contain such information, such as the National Assessment of Educational Progress (NAEP) and the High School and Beyond Study (HS & B) are typically conducted on scientific samples of students across the nation, and often do not include every state. They produce representative data for the nation as a whole, but have limited utility for an individual state interested in not only its state-wide picture, but important variations among the districts within it.

To include information on school performance in the NWREL database on at-risk youth, existing data from each state were requested and added to the database. These were data that were collected through any of a number of existing data collection systems in operation in each state. As noted in the introduction of this report, the comparability across states on many of these indicators is limited, due to important differences in the nature of the data available. State-wide testing data is a prime example. In her paper written in the first year of this project, entitled Beyond the Wall Chart: Issues for States, Patricia Anderson addressed this point directly. She noted that "with the exception of math and reading tests in the states, there is little commonality in the Northwest state assessment programs in number of subject areas, time of year for testing, grade levels tested or specific tests used." Consequently, in this report, the use of school performance indicators is limited to intrastate comparisons, contrasting the districts from which the data was obtained.
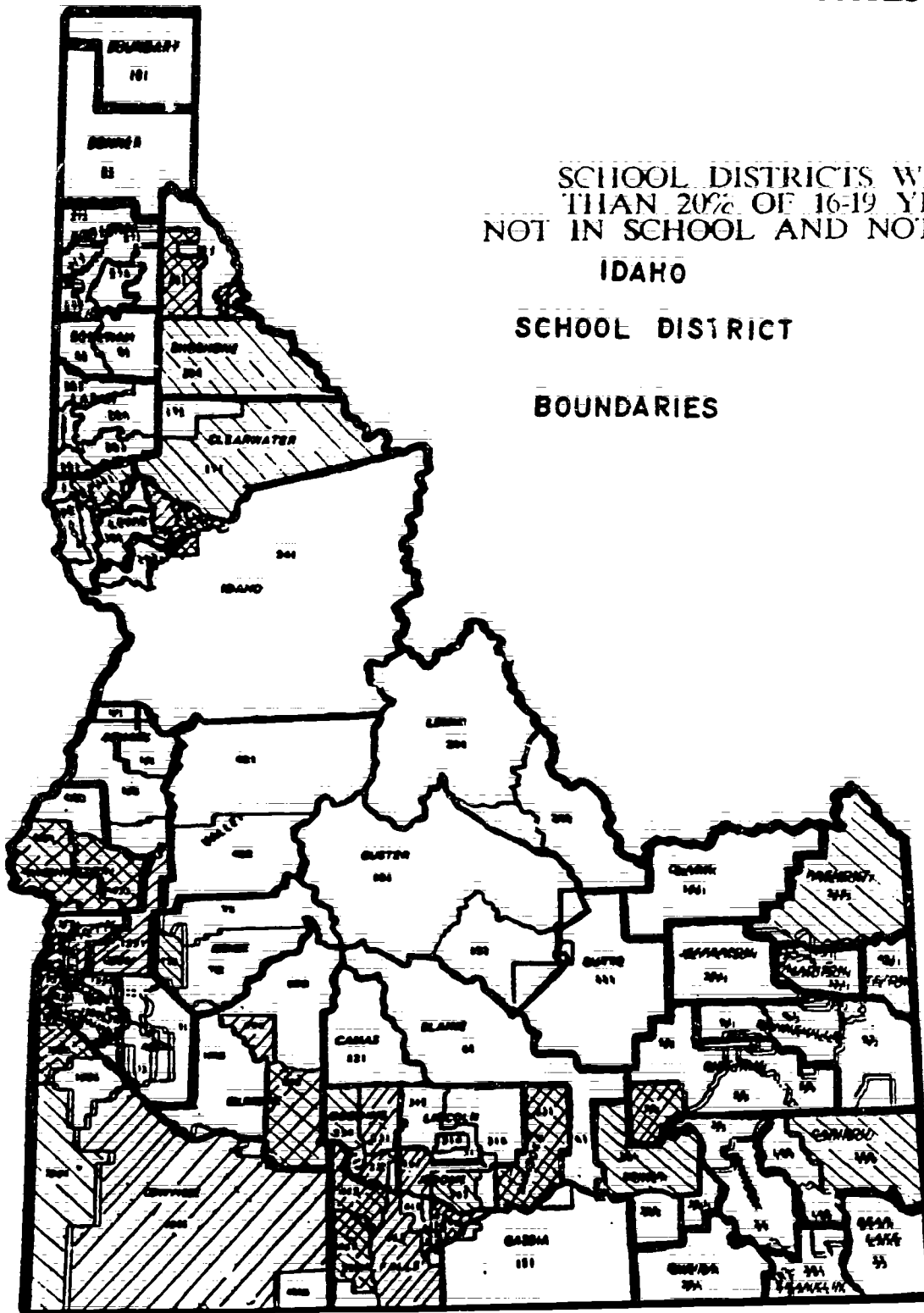
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SCHOOL DISTRICTS WITH MORE THAN ONE-THIRD
OF ADULTS NOT HIGH SCHOOL GRADUATES

SCHOOL DISTRICTS WITH MORE
THAN 20% OF 16-19 YEAR OLDS
NOT IN SCHOOL AND NOT GRADUATED

IDAHO

SCHOOL DISTRICT

BOUNDARIES

The state of Washington tests all students in fourth, eighth. and tenth grades each Fall. Reading and mathematics are included in the assessment at each of these grades. Results are reported in a variety of ways, but one particularly useful to the identification of high proportions of low achievers is illustrated in Table 11. The percent of students scoring in the first three stanines, as calibrated in the national norming sample of the Metropolitan Achievement Test, is shown for all fourth, eighth and tenth graders in Reading and Mathematics.

Table 11

Percent of Students Scoring Within
the First Three Staninesin Reading and Math by
Poverty Level of School District
State of Washington

Level of Poverty	Fourth Grade % of Students	Eighth Grade % of Students	Tenth Grade % of Students
Reading			
Very Low	13.8	13.7	10.8
Low	20.6	16.8	15.4
Moderate	19.3	18.3	16.1
High	22.0	19.9	19.6
Very High	24.7	28.6	21.3
State Ave.	19.6	17.0	15.0
Math			
Very Low	11.5	15.3	15.8
Low	19.4	19.6	18.6
Moderate	17.1	22.0	19.8
High	18.9	23.0	22.0
Very High	22.7	32.5	23.1
State Ave.	17.5	20.0	18.0

Very Low Poverty =	Less than 6% of families with children living below poverty level
Low Poverty =	6% to 9%
Moderate Poverty =	9% to 15%
High Poverty=	15% to 24%
Very High Poverty=	More than 24% of families with children living below poverty level

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The achievement data displayed in Table 11 suggest a number of things about Washington's students. First, there are fewer students scoring in this range in Washington than across the nation as a whole. The percentages are well below the expected 23% at all grades in both reading and math. This is obviously not true for all districts in the state, and the classification of Washington's districts by poverty level in Table 11 reveals one important factor in describing these differences. In all cases, districts falling in the "high" or "very high" poverty categories (i.e., with more than 15% of the families with children living below poverty level) have greater than the state-wide average of students scoring in the first three stanines. Further, it is only in these districts where the rates of low achieving students exceed national averages.

The importance of achievement indicators in identifying at-risk youth stems, of course, from the research that says that failure in school leads to disinterest and disengagement with the educational process, and eventual dropping out of school. As symptoms of risk, these achievement indicators can be attended to long before the high school years. Test scores, such as represented in Table 11 are only one source of this information. Student grade point average, covering performance in all courses, is another.

The value of tracking attitudes and behaviors of students as they progress through the educational system has been recommended by researchers and policy-makers alike. Some feel that before performance in class is affected, students begin "disconnecting" themselves from school through excessive absences, tardiness, and disciplinary referrals. Data on indicators such as these are particularly difficult to obtain, but one state in the Northwest region routinely collects this information and wanted it represented in its file in our regional database. In Table 12, the average daily absences, and percent of students suspended and dismissed from school are tabled for the 226 schools in Hawaii. As before, the schools are classified by size and percent of families living in rural settings.

Table 12

Attendance and Disciplinary Referrals
by School Size and Rurality in Hawaii

Size/Rurality	No. of Schools	Average Daily Absence '85-86	% of Students Suspended '85-86	No. of Students Dismissed '85-86
Very Small Rural	38	6.0	1.9%	2
Small Rural	3	8.5	15.1%	5
Large Rural	1	8.7	19.6%	0
Small Not Rural	138	4.9	1.4%	4
Large Not Rural	46	7.7	10.5%	18
State-wide	226	5.7	3.6%	29

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Attendance, suspensions and dismissals, as indicators of student disconnection from the school system, show great variation among the schools in Hawaii. The percent of students suspended is markedly higher in larger schools within the same rurality category. The smallest schools in the state—those with less than 1,000 students in rural settings, and fewer than 2,500 students in non-rural settings—suspend only 1% to 2% of their students. Larger schools suspend between ten and twenty percent of their students. Again, the reasons for these dramatic differences are not evident from the information in the database alone. Educational administrators and policy-makers familiar with Hawaii's schools can use the data summarized in Table 12 to better identify the schools with large numbers of students facing this kind of risk early in their educational careers.

Epilogue: The Development and Uses of the Regional Database

The tables, graphs and summaries presented in this report are illustrative of the kinds of data NWREL has extracted from various sources of extant data in the development of a regional database. Using terminology borrowed from our ad hoc review team, we have progressed through two of three stages of issue-based, database development. First, we have relied heavily on a patchwork approach, drawing data elements from a variety of existing sources, and "patching" them together into one framework. Secondly, we have piggy-backed on the findings from current studies by creating new indicators through combining a number of the data elements in the extant data. Our "dropout rate", for example, is computed by determining the number of 16-19 year olds in the district, and subtracting from this total the number of these who are in school, have graduated, are in the military, or have attained a high school equivalency by another means (e.g., a GED). To complete the database development cycle, we would engage in primary data collection to add data which cannot be obtained from existing data sources, yet is still crucial to the exploration of issues surrounding at-risk youth. For example, there is a great deal of interest in areas such as students' use of drugs and alcohol. These data are not routinely available for each district across a state. Individual districts will often survey their district population to assess the needs for intervention, but these data are not routinely reported to the state. NWREL has no plans to launch a primary data collection effort at this point. There is still a great deal of information to be obtained from the wealth of existing data already available. Acquiring this data, and assembling it into some usable form to respond to current questions in this vital policy area is the focus of our current efforts.

In tapping the reporting potential of the regional database, this report has selected a sample of indicators of children at risk, and displayed statistical summaries both across and within states. Region-wide and state-wide representations were obtained. The information in the database can be reported in other ways. A sampler of these is given below:

Lists of district names - Given a set of important characteristics, a list of districts possessing this characteristic or specified degrees of it could be generated. For example, a list districts with a high school dropout rate of more than 20% could be generated. Further, other relevant information on these districts could be provided—their size, poverty, rurality, etc. State decision makers could supplement their understanding of trends and variations across their state with the districts identified as being most in need of assistance.

District results compared with state-wide results–Using results from the regional database, a district "profile" of relevant information can be constructed for each district within the region. Its rate of families living below poverty, of limited English speaking students, dropout rate, attendance patterns, etc., can be presented in relation to state-wide or regional averages. In addition, other districts in the state or region which match this district in characteristics of interest can be extracted from the database and serve as another type of comparison for this district's profile. Table 13 illustrates this type of profile.

Finally, the descriptive information from the NWREL database has policy implications at each level of decision-making–the school, district or state. The NWREL database summarizes an extensive amount of data at regional, state, district and school levels. The variation at any of these levels allows us to discover new relationships in the data or to confirm previous knowledge. In either case these new relationships and knowledge can be presented for decision-makers' actions.

We conclude our report with these findings from the illustrative analyses of the NWREL database presented here, along with potential policy implications for each. We invite our readers, most of whom are closer to the current at-risk policy issues in their state, district or school, to refine these examples and generate others.

State Level:

Finding: Dropping out of school is highly related to community contextual factors where communities with the highest percentage of adults not completing high school also have the highest percentage of 16-19 year olds not graduating from high school.

Policy implications: Should a special study be initiated in the districts with high and low relationships? Is the observed relationship reflecting community or family attitudes or does it relate to the economy of the area? Should school interventions be focused both at the parents and the students?

District Level:

Finding: School districts with higher rates of poverty have higher percentages of students scoring in the lowest quartile or stanine of achievement tests.

Policy implications: Should further analysis be conducted at the school level by those districts with high rates of poverty and students in the lowest achievement groupings? What kinds of programs have been shown to raise cognitive performance in poverty neighborhoods? Should additional resources and programs be placed in schools with high rates of poverty and low achievement?

School Level:

Findings: The variation in each of the indicators is far greater among schools than it is among districts or states.

Policy implications: Does the aggregation of data to the district and state levels mask more information than it reveals? When special program monies are available, do districts run the risk of spreading the money to thinly when district-level data are used rather than school-ievel data?.

Table 13

Profile of One School District

Characteristic	Sample District	Similar Districts	State
Enrollment	2068	1598	2598
Community Demographic			
% Rurality	41.34	<75%	75%
% Adults (25+) Not HS Grads	27.12%	28.4%	26.8%
% Families w/Children in Poverty	10.33%	11.4%	12.2%
% all Families in Poverty	13.8%	16.3%	18.1%
% One-parent Families	17.2%	14.8%	15.4%
% Mothers of Children Working	54.3%	52.7%	49.6%
% New to Home in last 5 Years	53.4%	58.3%	53.1%
% aged 5+ who speak poor English	.73%	1.3%	1.1%
Median Family Income	18,924	19,183	19,298
School Outcome			
% in lowest Stanine-Math 4th Gr	18.%	18.7	17.5%
% in lowest Stanine-Read 4th Gr	11.%	19.5%	19.6%
% in lowest Stanine-Math 8th Gr	23.%	21.0%	21.3
% in lowest Stanine-Read 8th Gr	20.%	16.8%	18.1%
% in lowest Stanine-Math 10th Gr	29.0%	20.1%	19.7%
% in lowest Stanine-Read 10th Gr	24.0%	17.4%	16.2%
% 16-19 Yr Olds Not in School; Not Graduated	16.96%	15.1%	14.1%

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Appendix A

The NWREL Database

1980 Census Data

The 1980 Census of Population and Housing data for each of the local Education Agencies (LEAs) or school districts were prepared under the authority of P.L. 95-561 which requires the Secretary of Commerce to provide the statistical data at that level.

The Department of Education obtained LEA boundary maps for each of the LEAs from the state education agencies. Bureau of Census cartographic personnel transferred the LEA boundaries to the approximately three million geographic areas used in the Census. Whenever an LEA boundary intersected a census boundary, an apportionment factor for the latter was determined by the cartographer. Following apportionment, a table of equivalents based on the unsuppressed census files allowed aggregation of the data to the LEAs by level.

With the exception of population and housing counts, which are based on 100% of the population, the social, economic and schooling characteristics of the population (File 3F) are based on sampling the population. For census units (places, tracks, blocks, etc) of 2500 or more, the sampling was a 20% sample. For units less than 2500, the sampling was 50%.

Table 1 lists the types of data elements available in our file.

Table 1

1980 Census Items Available in NWREL Database

Population
*Household relationship
*Sex
*Race
*Age
*Marital status
*Spanish origin
School enrollment
Years school completed
Nativity and place of birth
Language spoken at home and
  ability to speak English
Residence in 1975
Labor force status in 1979
Vet status and period of
  service
Work disability status
Transportation disability
Children ever born
Place of work
Transportation to work

Housing
Number of Units at address
Complete plumbing facilities
Number of rooms
Tenure(own or rent)
Vacancy status
Value of housing unit
Rent
Units in structure
Stories in structure
Year structure built
Year householder moved in
Source of water
Farm residence
Sewage disposal
Heating equipment
Heating fuel
Kitchen facilities
Selected owner costs
Selected housing amenities

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Industry of work
Occupation
No weeks worked in 1979
No weeks unemployed
Income in 1979
Poverty status in 1979

*100% count

Each of the characteristics are provided as tables. For example, there are more than 20 categories of race. There are 8 categories of labor force and school status of persons 16-19. Table presentations allow for a certain amount of recoding (adding, subtracting, creating percents) to create new variables. Since the presentations are tables, rather than individual records, you cannot present all possible comninations of the data elements (e.g., determine the number of persons "below poverty" and "limited English speaking.")

State Data

All states were requested to provide data from their state testing program by district (or school), enrollment by grade, ethnicity, free or reduced lunch, special education enrollment, student absences, tardies and suspensions, drop-out statistics, Ch 1 enrollment and so on. Data submitted varied by state.

Oregon provided their file developed for their state profile system. This file contained 8th grade testing results from sampled schools and reported results of other districts. Information on enrollment, ethnicity, teacher tenure in the district and in any other district, teacher academic attainment, teacher age, and teacher salary. Free/reduced lunch data were also supplied as were data on school finance.

Washington data included the state assessment file. This file contained the school scores for students in 4th, 8th and 10th grade. Additionally, those students who were tested completed a student survey which tapped information on student background (e.g., years in district) to student interests (e.g., post school plans). Data on federal program involvement, ethnicity, student dropouts and school finance were included.

Idaho provided data on student enrollment, federal student eligibility, graduation rates, student achievement scores in 8th and 10th grades, free/reduced lunch and finance data.

Montana provided information on student enrollment including special education enrollment, teacher characteristics, free/reduced lunch and school finance.

Hawaii provided their school profile tape. This tape included information on enrollment, ethnicity, student absences, student misbehavior, teacher tenure, teacher absences, student achievement test results for grades 2,4,6,8 and 10, students with limited English proficiency, students with less than a GPA of 2.0 and more than a GPA of 3.0, student retentions and transfers. This data tape includes data for up to four years on some of the variables.

Alaska provided information on student enrollment, teacher age, ethnicity and tenure, federal program enrollment.

Relationship to Current Data

In order to test the relationship of census data to the more current data provided by states, correlational analyses were conducted for two states on enrollment data and one state on 16-19 year dropouts with current dropout data and poverty with free and reduced lunch enrollments. Enrollment correlations were $r = .97$ for Oregon and $r = .99$ for Idaho. The dropout correlation was $r = .34$ for Washington while the family poverty and free/reduced lunch correlation was $r = .14$.

Northwest Regional Educational Laboratory
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MISSION The Northwest Regional Educational Laboratory (NWREL) is an independent, nonprofit research and development institution established in 1966 to assist education, government, community agencies, business and labor in improving quality and equality in educational programs and processes by:
- Developing and disseminating effective educational products and procedures
- Conducting research on educational needs and problems
- Providing technical assistance in educational problem solving
- Evaluating effectiveness of educational programs and projects
- Providing training in educational planning, management, evaluation and instruction
- Serving as an information resource on effective educational programs and processes including networking among educational agencies, institutions and individuals in the region

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