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ABSTRACT

This report offers data from a depiction study that provides information on the context in which teachers in the Northwest U.S. must teach, current teacher supply and demand, teacher preparation in the Northwest, and current professional development activities and their funding sources. The study makes use of available local, state, regional, and national data. Examination of the setting and context in which teachers teach focuses on demographics, who the students are, what is known about the schools they attend, and what the implications of these data are for the preparation and professional development of teachers. Examination of the teacher workforce focuses on demographics, teacher qualifications, and the growing teacher demand (including the demand for minority teachers). Examination of teacher preparation and certification focuses on student teacher characteristics, student motivation to teach, and levels of certification. Examination of professional development highlights beginning teacher induction activities, mentoring, program characteristics and participation, school and district support for teacher development, program funding, teacher attitudes, and technology training. (Contains 23 references.) (SM)

# THE PREPARATION AND PROFESSIONAL DEVELOPMENT OF TEACHERS IN THE NORTHWEST: A DEPICTION STUDY

**Revised Edition**
**December 1998**
**Portland, Oregon**

**Northwest Regional Educational Laboratory**

**Planning and Program Development**
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The idea for a depiction study identifying key issues and needs in the region related to teacher preparation and professional development grew out of a collaborative effort between NWREL and five deans of education in each of the five NWREL states. NWREL would like to acknowledge the following for their input on this project Dr. Robert Barr, Boise State University, Dr. Robert Everhart, Portland State University, Dr. Dale Gentry, University of Idaho, Dr. Allen Glenn, University of Washington, and Dr. Donald Robson, University of Montana.

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# INTRODUCTION

Today there are two forces driving the need to reform the teaching profession. The first is a rapidly changing information-based world economy, where students will need knowledge and skills far different than those of our 20th-century industrial-based economy. The second is the fact that most students in the lowest performing quartiles face obstacles to academic success that schools, as well as the community, are not adequately addressing.

In response to these forces, national reports have focused on the need for the reform of teacher preparation, teacher professional development, and teacher career-path programs (*A Nation at Risk*, 1983; Carnegie Forum on Education and the Economy, 1986; recent reports from the Holmes Group and National Commission on Teaching and America's Future; Goals 2000), while state reforms have focused on what student's should know and be capable of doing. In the Northwest region, for instance: *Alaska 2000; Idaho: Schools for 2000 and Beyond; Oregon: Schools for the 21st Century Act (HB 3565), Workforce 2000 Act, and Workforce Quality; Washington Education Reform Act (HB 1209) and the Washington Workforce Training Act; and, Montana Project Excellence: Designing Education for the Next Century.*

In any case, schools and communities are pressed to reform–to reform in order to meet the new standards for student performance. And a direct result of these pressures to improve student performance has been the reexamination of the role and responsibilities of teachers as well as their qualifications. There is, in short, a renewed interest in the preparation and development of teachers–from preservice to retirement.

To date, the approach to teacher preparation and development has been somewhat fragmented. For example:

1. State certification agencies, higher education institutions, and school districts all tend to operate in isolation from one another.
2. Certification reciprocity among the Northwest states is incomplete.
3. Professors of higher education have distinct ideas about what makes a "good" teacher–ideas that can differ significantly from those of parents, taxpayers, even classroom teachers. Teachers of teachers overwhelmingly describe the purpose of schooling to be "showing students how to learn," and they describe successful teachers as facilitators more than instructors (Public Agenda, 1997), while the public's priorities are that teachers have the ability to address classroom behavior issues, to model and expect discipline in work habits, and to instruct students in basic academic skills.

Although the constituencies struggle to articulate what is taught, to whom, and how, there is consensus that for reform efforts to be successful, a more integrated and comprehensive approach to the preparation and professional development of teachers is imperative. To this end the Northwest Regional Educational Laboratory (NWREL) has produced this first depiction study on the preparation and professional development of teachers in the Northwest.

The focus of this depiction study includes the following :

- An overview of the demographics, the schools, and the students in the Northwest—the context in which teachers in the region must teach
- The current teacher workforce, teacher supply and demand in the Northwest, and the resources from which the region can draw
- An overview of teacher preparation in the Northwest and the process by which educational institutions develop new teachers for the workforce
- An overview of professional development activities of teachers and how they are funded in the Northwest—the means by which we continue to strengthen the capabilities of the workforce

This depiction study makes use of available local, state, regional, and national data but limits its considerations, knowing full well that issues such as working conditions in the schools, for example, may affect where teachers apply to study and to teach, how they feel about teaching, how long they stay, and so forth.

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# THE SETTING

**The following questions suggest the focus of this section:**

- **What demographics characterize the Northwest?**
- **Who are the students and what do we know about the schools they attend?**
- **What are the implications of these data for the preparation and professional development of teachers?**

## Some Characteristics of the Northwest that Influence the Context for Teaching

In order to understand the needs and issues related to preparing new teachers and developing practicing teachers in the Northwest, it is important to understand the context in which education occurs, the characteristics of schools and students that impact what and how a teacher must teach, and the resources available for doing so.

### School Size, Growth, and Distribution

Across the five-state region, almost 5,300 schools are organized into approximately 1,200 districts serving more than two million children. The Northwest has been experiencing above average enrollment growth, and almost 250,000 new students were added between 1990 and 1996. Montana was the only state in the region in which enrollment growth did not exceed the national enrollment growth rate (See Table 1-1).

The distribution of enrollment growth and decline will determine, in part, where demand for new teachers will come from. Growth has not been even throughout the region. Based on an analysis of data from the NCES *Common Core of Data*, between the 1990-91 and 1993-94 school years, approximately one out of five of the region's schools lost 10 percent or more of its enrollment, while two out of five gained 10 percent or more in enrollment. Rural and mid-size city areas (cities with populations less than 400,000 but greater than 25,000 and a population density less than 6,000 people per square mile) and suburbs had the highest percentage of schools experiencing rapid growth. Schools losing enrollment were fairly evenly distributed among locales in the region. The teacher -to- student ratio for the region, at 1:19.7, was above the national average. The two states that had the highest enrollment growth, Washington and Oregon, also had the highest student-to-teacher ratio. Growth in enrollment is expected to continue, but will vary from state to state (See Table 1-1).

Table 1-1

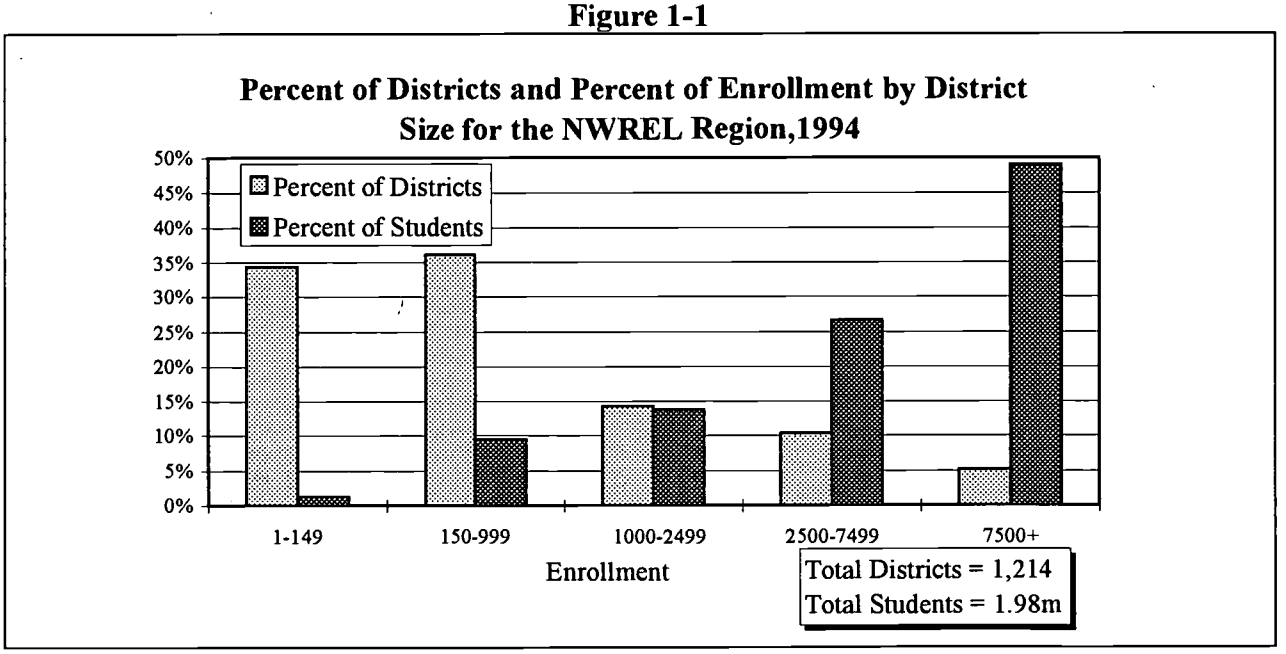
**Demographic Characteristics of Northwest Schools**

| | Districts | Schools | 1996 Estimated Enrollment | Enrollment Change 1990-91 to 1995-96 | Student/ Teacher Ratio 1995 | Estimated Enrollment Growth 1994 to 2000 |
|---|---|---|---|---|---|---|
| **Alaska** | 56 | 489 | 126,015 | 11% | 17.3 | 14.2% |
| **Idaho** | 112 | 608 | 245,252 | 11% | 19.0 | 5.6% |
| **Montana** | 481 | 899 | 166,909 | 9% | 16.4 | 1.4% |
| **Oregon** | 248 | 1,213 | 537,783 | 14% | 19.8 | 10.3% |
| **Washington** | 296 | 2,064 | 971,903 | 16% | 20.4 | 14.0% |
| **Region** | 1,193 | 5,282 | 2,047,862 | 14% | 19.7 | 11.0% |
| **U.S.** | 14,722 | 86,221 | 45,228,526 | 10% | 17.3 | 7.7% |

Data Source: Districts from Table 91. Schools from Table 96. Enrollment from Table 65. Student/teacher ratio from Table 66. *Digest of Education Statistics,* 1997, NCES. Estimated enrollment growth from Table 46. *Projections of Education Statisitics to 2006*, NCES.

**District size.** District size varies considerably across the region, from district enrollments of fewer than 10 students to more than 50,000. As Figure 1-1 indicates, districts with small enrollments represent a large proportion of the districts in the region. In fact, 70 percent of the districts across the region have fewer than 1,000 students. However, they serve only a small portion (10 percent) of the region's students. Only five percent of the districts have an enrollment larger than 7,500 students, but they serve half the students in the region These districts are found in urban and suburban areas.

**Figure 1-1**




Data Source: 1994 data from *The Common Core of Data (1998)*, NCES.

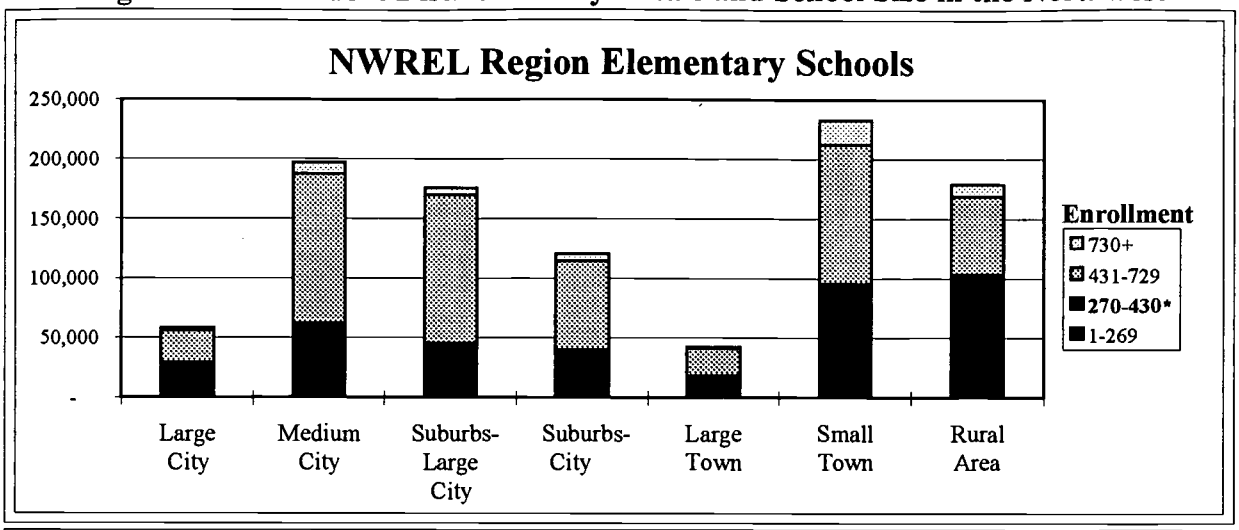
District size determines, in part, the types of resources available to school students, staff and administration, and some of the challenges they face. Districts with larger student enrollments address problems of overcrowding, population diversity, and difficulty in ensuring a coherent

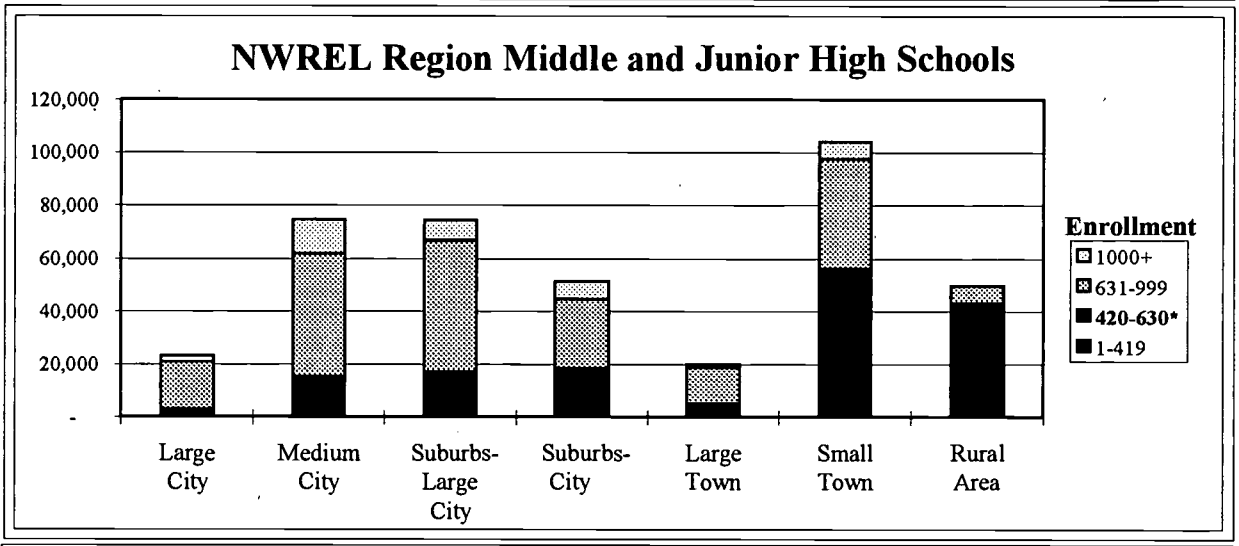
districtwide educational program while at the same time supporting increased building-level autonomy. On the other hand, districts with smaller enrollments address issues such as limited support services for curriculum design, staff development, and special programs.

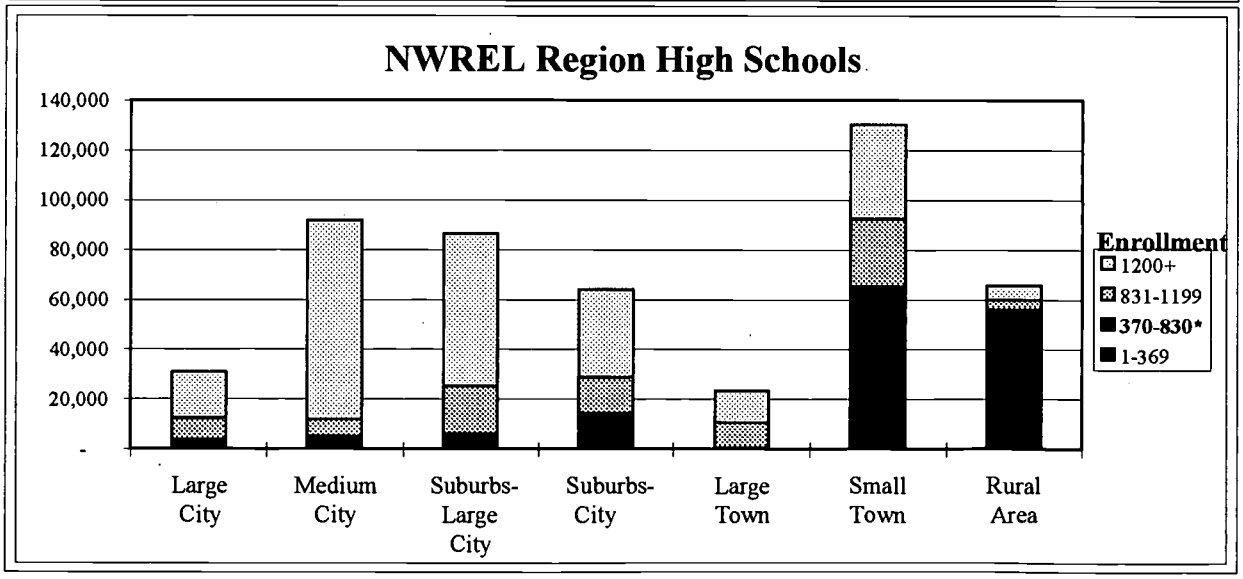
**School size.** School size is an important factor in the quality of the school experience for students and teachers. School size in the Northwest region varies considerably, ranging from only a few students to a high of 1,140 students in elementary schools, 1,740 in junior high and middle schools, and 2,500 students in high schools. In a review of research studies on school size, Cotton (1996) describes the effects of size on student performance and attitudes. Her research synthesis reports the school sizes that are considered optimal for supporting a good learning environment: 200 to 330 students in elementary schools, 400 to 600 in junior high or middle schools, and 400 to 800 in high schools. Optimal-size schools are large enough to support a wide range of collaboration and learning opportunities for students and teachers, yet are small enough to maintain a climate of intimacy and connectedness. Minority and female students have a greater probability of a successful school experience in this environment.

Figure 1-2 shows what portion of our region's students are being educated in "optimal-size" schools. Students attending schools in the "optimal range" (plus or minus 30 students) are represented by the black band in each bar for elementary, junior, and senior high schools. Small towns have the greatest number of students in optimal size schools at all age levels, but even here, the majority of students are not in optimal-size schools. Clearly, the majority of our students are in schools significantly larger than optimal size. This is especially true for high school students in city and suburban areas, where more than 70 percent of students attend schools that exceed optimal school size by 50 percent or more. Rural students are more likely to have the opposite problem—schools that are too small to provide an adequate range of educational opportunities. One out of five Northwest schools has fewer than 100 students. Teachers in small, rural schools often are required to wear many hats. For example, a science teacher may make up the entire science department, teaching biology, chemistry, and physics.

**Figure 1-2 Student Distribution by Locale and School Size in the Northwest**




***Optimal school size**: Elementary level, 300-400 students; middle or junior high level, 400-600 students; and high school level, 400-800 students.

Data source:: 1994 data from *The Common Core of Data (1998)*, NCES

**School location and isolation.** The majority of Northwest schools are located in small towns and rural areas. This is especially true for schools in Alaska, Idaho, and Montana, where 70 percent or more of all schools are located in small towns or rural areas (See Table 1-2).

## Table 1-2

### Distribution of Schools by Locale, 1994

| Locale | Alaska | Idaho | Montana | Oregon | Washington | Total Schools |
|---|---|---|---|---|---|---|
| Metro - Urban | 14% | 9% | 6% | 19% | 27% | 18% |
| Metro - Suburban | 4% | 7% | 2% | 38% | 28% | 21% |
| Large Town | 0% | 12% | 3% | 3% | 1% | 3% |
| Small Town | 20% | 30% | 17% | 23% | 19% | 21% |
| Rural | 63% | 41% | 71% | 16% | 25% | 36% |
| Total Schools | 498 | 608 | 899 | 1,213 | 2,064 | |

**Locale Definitions:**

**Large City:** Central city of a Metropolitan Statistical Area (MSA) with a population greater than or equal to 400,000 or a population density greater than or equal to 6,000 people per square mile.

**Mid-size City:** Central city of an MSA with a population less than 400,000 and a population density less than 6,000 people per square mile.

**Urban Fringe of Large City:** Place within an MSA of a large central city and defined as urban by the Census Bureau.

**Urban Fringe of Medium City:** Place within an MSA of a Mid-size Central City and defined as urban by the Census Bureau.

**Large Town:** Town not within an MSA, with a population greater than or equal to 25,000.

**Small Town:** Town not within an MSA and with a population less than 25,000 and greater than or equal to 2,500 people.

**Rural:** A place with fewer than 2,500 people and coded rural by the Census Bureau.

Data Source: *The Nonfiscal Surveys of the Common Core of Data, 1994,* NCES. As reported in *Northwest Trends Shaping Education: The 1997 Regional Education Needs Assessment*, NWREL, p.14.

One aspect of location, most common to small-town and rural schools, is isolation. Isolation is defined as distance from, or lack of access to, resource centers, and in this analysis it refers to districts that are located 30 miles or more from a city of 10,000 or more in population. Isolation is represented by the relatively high cost, low frequency, and physical or technical difficulty of obtaining access to resources outside the school or district. Isolation creates special challenges to teachers because it limits access to information, collaborative opportunities, professional development opportunities, teaching resources and opportunities, and support services for students. Isolation makes it difficult to attract and retain qualified staff.

Isolation is a condition found in the large majority of districts in Alaska (98 percent) and Montana (81 percent). It is a problem faced by a smaller percentage of districts in the other three states in the region (See Table 1-3).

Table 1-3

## Distribution of Isolated School Districts in the Region, 1992 *

| State | Number | Percent |
|---|---|---|
| Alaska | 53 | 98 |
| Idaho | 53 | 46 |
| Montana | 435 | 81 |
| Oregon | 114 | 39 |
| Washington | 106 | 36 |
| Total | 761 | 59 |

*Isolated districts are districts that are located 30 miles or more from a city of 10,000 or more in population

## The Student Population

Just as the nature of schools varies widely across the region, so does the nature of the student population in terms of socioeconomic status, cultural background, and other factors. This section will examine these factors and highlight the implications they have for training and developing preservice and inservice teachers.

**Poverty.** In 1995, 19 percent of school-age children in the United States were living in poverty. Child poverty was less severe in the Northwest, where all of the states were at or below the U.S. average. At 19 percent Montana had the highest rate of poverty among school-age children. Idaho's rate was 16.7 percent, Washington's was 16.6 percent, Oregon's was 16.2 percent, and at 6.7 percent Alaska had the lowest rate. Average state poverty-rate figures, however, give a very incomplete picture of where the burden of poverty falls on schools in the region. Poor students are very unevenly distributed among Northwest schools. While 58 percent of the Northwest's 4,900 schools have fewer than one out of seven students qualifying for free and reduced-price lunches, in 14 percent—700 schools—a third of their students are eligible (see Table 1-4).

Table 1-4

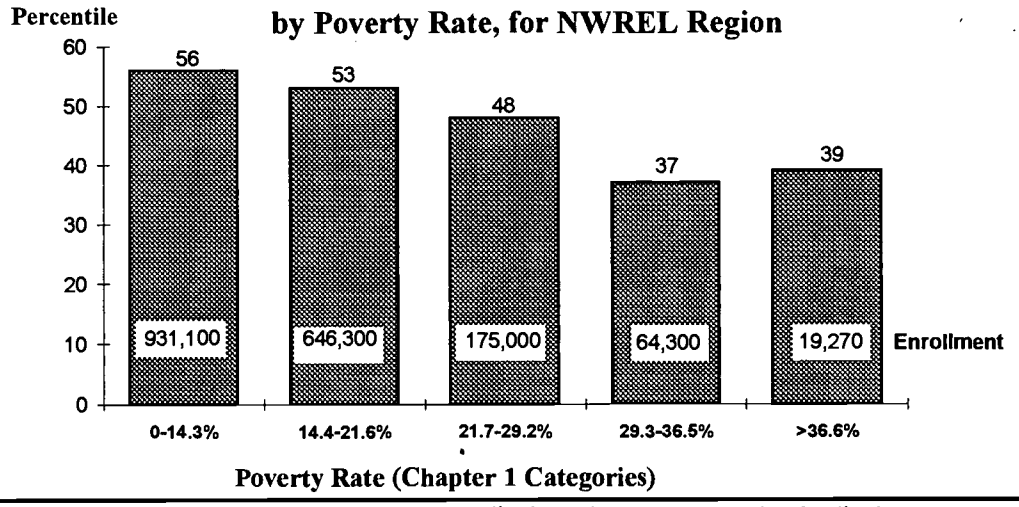
## Distribution of Poverty in Northwest Schools

| Title I Poverty Level | Enrollment | % of Regional Enrollment | Free Lunch Eligible | Number of Schools | % Schools in the Northwest |
|---|---|---|---|---|---|
| 0 to 14.3% | 1,309,799 | 67% | 29,691 | 2,897 | 58% |
| 14.4% to 21.6% | 209,565 | 11% | 37,088 | 563 | 11% |
| 21.7% to 29.2% | 154,635 | 8% | 39,129 | 455 | 9% |
| 29.3% to 36.5% | 110,726 | 6% | 36,360 | 350 | 7% |
| > 36.5% | 183,341 | 9% | 92,526 | 696 | 14% |
| | 1,968,066 | | 234,794 | 4,961 | |

Data Source: 1995 data from *The Common Core of Data (1998)*, NCES.

Poverty is known to have a close relationship to how well students do in school. An analysis of student achievement in the Northwest supports national research suggesting that as poverty rates increase, the average school district performance on standardized tests decrease. (see Figure 1-3). This decrease in student achievement may be due, in part, to the fact that poor schools tend to have less qualified teachers (*National Center for Education Statistics* [NCES], *1997)*. The National Commission on Teaching and America's Future (1996) reports that students in schools with the highest enrollments of ethnic minority students have "less than a 50% chance of getting a science or mathematics teacher who holds a license and a degree in the field he or she teaches." Thus, the question is, do all students have equal access to a quality education?

**Figure 1-3**
**Average District Achievement, by Poverty Rate, for NWREL Region**



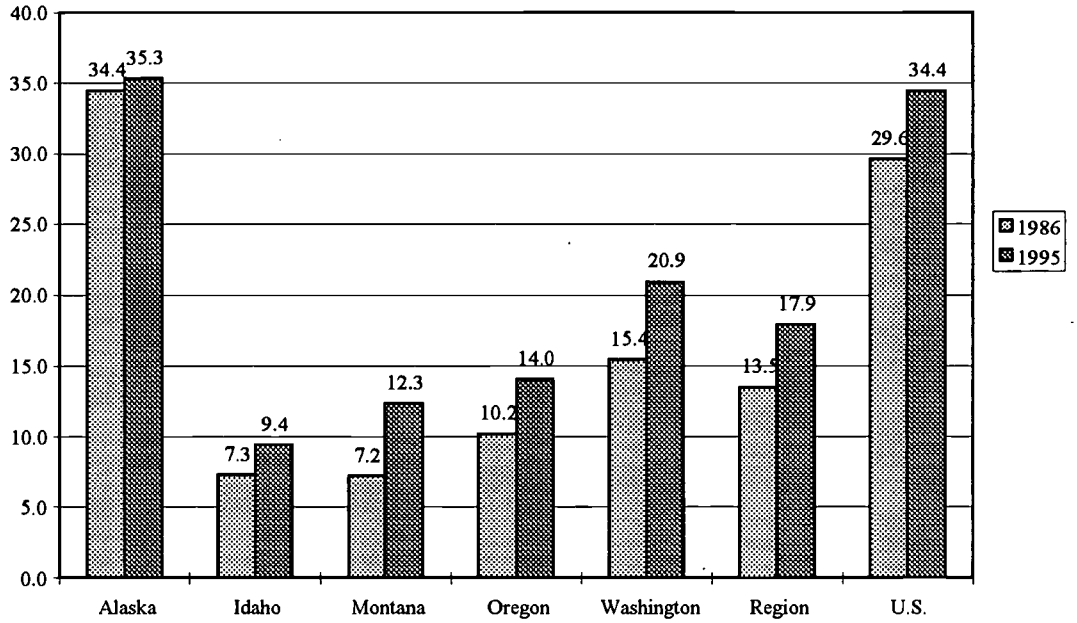

Data source: Calculated from state achievement test data by district and census poverty data by district.

Poverty has implications for what teachers must know and be able to do. Many poor children come to school less ready to learn than children higher on the socioeconomic scale. Their teachers must be prepared to provide the supports and structure for learning, and the learning opportunities, that are often lacking in their home lives. They must understand the culture of poverty, and what is required to help poor children develop the attitudes and social and academic skills that will enable them to move into the economic mainstream (Payne, 1995). Also knowing how to help families navigate the maze of social services is a skill that is important for teachers who have low income students.

**Minority enrollment.** Public school student populations have become increasingly diverse in race and ethnicity. This has implications in terms of the skills teachers need for teaching and relating to students with different cultural backgrounds and languages. By 1994, one in three students belonged to an ethnic minority in the United States. In the Northwest, the ratio was approximately two in five. While the proportion of minority students in the Northwest is lower than the U.S. average, the rate of increase in some states in the region has been high. In Montana, for instance, the proportion of minority students almost doubled between 1986 and 1992, going from 7.3 percent to 12.3 percent. In Washington, minority enrollments increased from 15.5

percent to 20.9 percent; in Oregon, from 10.2 percent to 14.0 percent; in Idaho, from 7.4 percent to 9.4 percent; and in Alaska, from 34.3 percent to 35.5 percent. While the rate of increase for Alaska was low, this state's proportion of minority students is the highest in the Northwest and is primarily Alaska Native (see Figure 1-4).

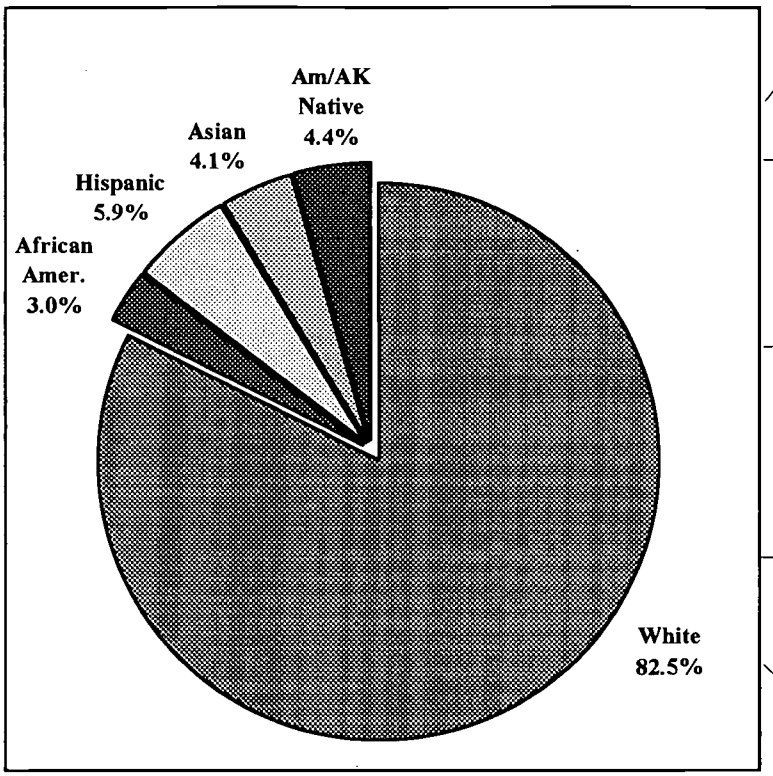
**Figure 1-4**
**Percent Change in Minority Enrollment**
**1986-95**




Data Source: Enrollment and percent minority for 1986 and 1995 are from *The Digest of Education Statistics*, 1996, NCES.

Hispanic students, at almost 6 percent of total enrollment, make up the largest proportion of the minority enrollment in Northwest schools. Native American students make up 4.4 percent of total enrollment, Asian students 4.1 percent, and African American students 3.0 percent (see Figure 1-5).

## Figure 1-5 Public School Students by Racial/Ethnic Group in the Northwest, 1993-94




| Alaska | Percent |
|---|---|
| White | 66.0 |
| African Amer. | 4.2 |
| Hispanic | 2.3 |
| Asian | 3.7 |
| Am/AK Nat | 23.9 |

| Idaho | Percent |
|---|---|
| White | 90.6 |
| African Amer. | 0.4 |
| Hispanic | 7.2 |
| Asian | 0.8 |
| Am/AK Native | 1.0 |

| Montana | Percent |
|---|---|
| White | 86.5 |
| African Amer. | 0.4 |
| Hispanic | 1.1 |
| Asian | 0.1 |
| Am/AK Native | 11.2 |

| Oregon | Percent |
|---|---|
| White | 86.3 |
| African Amer. | 2.6 |
| Hispanic | 5.8 |
| Asian | 2.8 |
| Am/AK Native | 2.4 |

| Washington | Percent |
|---|---|
| White | 79.7 |
| African Amer. | 4.2 |
| Hispanic | 7.0 |
| Asian | 6.5 |
| Am/AK Native | 2.6 |

Data Source: Schools and Staffing Survey, 1993-94, U.S. Dept Ed, NCES

**Distribution of minority enrollment.** The different minority groups tend to concentrate in different locales of the region. Asian and African American students are concentrated mainly in the central city schools of large metropolitan areas. Mid-size central city areas and their urban fringe generally have more evenly mixed minority enrollments. Asian students make up the largest minority group in the urban fringe schools. Hispanic students are concentrated in more rural areas, including small-town locales, and almost half the Native American enrollment, including Alaska Natives, is found in rural schools (see Table 1-5).

Table 1-5

**Regional Minority Enrollment by Locale and Minority Group 1992**

| Locale | Number Of Districts | Total Enrolled | (%) Minority Enrolled | (%) Range Minority by Locale | (%) Native Amer./Alaska Native | (%) Asian | (%) African American | (%) Hispanic |
|---|---|---|---|---|---|---|---|---|
| Large City | 5 | 129,172 | 39.4 | 21-58 | 2.6 | 15.4 | 16.0 | 5.3 |
| Mid-size City | 33 | 385,264 | 17.7 | 2-57 | 3.1 | 4.5 | 4.3 | 5.7 |
| Urban Fringe of Large City | 68 | 316,053 | 14.3 | 0-33 | 1.1 | 6.6 | 2.8 | 3.8 |
| Urban Fringe of Medium City | 97 | 204,879 | 14.6 | 0-61 | 1.6 | 4.3 | 3.7 | 5.1 |
| Large Town | 13 | 76,656 | 9.9 | 4-22 | 1.4 | 1.7 | 0.7 | 6.0 |
| Small Town | 215 | 479,582 | 14.5 | 0-68 | 4.1 | 1.8 | 0.9 | 7.7 |
| Rural | 862 | 346,648 | 18.1 | 0-100 | 10.3 | 1.2 | 0.6 | 5.9 |
| Region | 1,293 | 1,938,000 | 17.2 | | 4.1 | 4.2 | 3.1 | 5.9 |
| **TOTAL** | | | | | 78,700 | 81,000 | 61,000 | 114,100 |

Data Source: *The Nonfiscal Surveys of the Common Core of Data*, NCES, for Alaska, Montana, Oregon, and Washington. Idaho minority data from the Idaho Department of Education.

Many teachers have little experience or preparation in teaching in multicultural environments. As the population becomes increasingly diverse, schools and teachers need to learn to adapt and strengthen strategies of inclusiveness and broad cultural understanding. According to a recent report of the Northwest Regional Educational Laboratory, *The Need for Diversifying the Teacher Workforce in the Northwest* (1997), "By the year 2005, K-12 enrollments in the Northwest are projected to be almost 22 percent students of color, while the numbers of teachers of color in the workforce is projected at only 8.6 percent across the region " (p. 1). By 2020, it is projected that half of the students in the United States will belong to an ethnic minority group. Clearly, greater effort must be focused on preparing and recruiting more minorities for the teaching workforce.

**Limited English proficiency (LEP).** Data from the *Schools and Staffing Survey* for 1993-94 indicate that the Northwest has almost 70,000 limited-English-proficient (LEP) students, including immigrant children, children of non-English speaking immigrant parents, and children of non-English speaking native parents-Native Americans and Alaska Natives. National trends indicate that the number of students who have difficulty communicating in English has increased. Schools in all NWREL states are facing a growing challenge in meeting the needs of these students whose first language is not English and who bring to the learning environment a myriad of cultural differences and experiences. As of 1993, Alaska had the highest percentage of LEP students at 7.8, followed by Washington at 4.1, Montana at 2.9, Oregon at 2.6, and Idaho at 2.2. The trend of increasing numbers of students with limited English proficiency has implications for preservice teacher preparation and for professional development. While nearly 42 percent of all public school teachers have at least one student with limited English proficiency, fewer than one in three has had any training in teaching such students (National Center for Education Statistics [NCES], *SASS*, 1996).

The greatest numbers of immigrants to the Northwest come from the former Soviet Union, Mexico, Vietnam, the Philippines, and China. The large majority are settling in Washington and Oregon, and 93 percent live in metropolitan areas. In some Northwest districts more than 15 different languages and dialects are spoken, creating real problems for teachers who must communicate with immigrant students and their families. In most states, immigrant children experience poverty at a rate more than twice the state average for school-age children. Additionally, children who immigrate as adolescents have a dropout rate almost three times as high as first-and second-generation immigrants, and they drop out earlier; three quarters leave school by the end of ninth grade (Brandon, 1995).

Most frequently, the challenges inherent in teaching limited-English-proficient students are coupled with the challenge of teaching students of diverse cultures. *The Schools and Staffing Survey* indicated that in schools with 50 percent or more minority enrollment, nearly one in three had at least 10 percent limited-English-proficient students (See Table 1-6).

**Table 1-6**

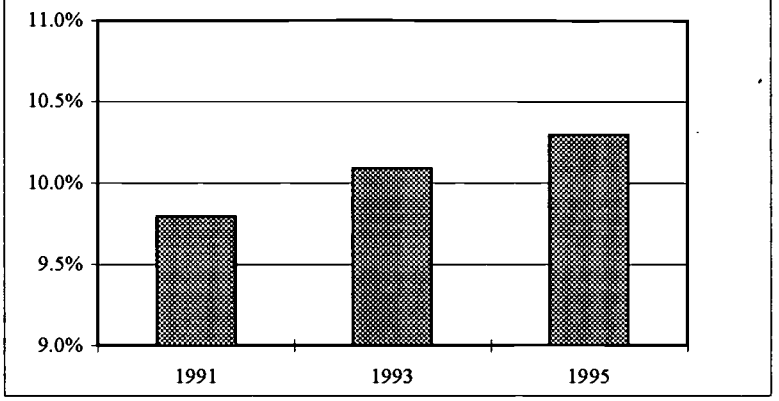
**Percentage of Schools with 10 percent or more LEP students in 1993-1994, by community type and minority enrollment**

| | Total | Central City | Urban/ fringe/ large town | Rural/ Small town |
|---|---|---|---|---|
| Total | 8.7 | 16.2 | 8.2 | 4.4 |
| Minority Enrollment | | | | |
| 0-30 percent | 4.6 | 7.3 | 4.7 | 4.2 |
| 31-50 percent | 13.9 | 13.6 | 17.9 | 10.9 |
| More than 50 percent | 29.4 | 30.5 | 28.6 | 27.4 |

Data Source: U.S. Department of Education, NCES, *Schools and Staffing Survey*: 1993-94

**Students with disabilities.** One out of ten students in the Northwest is disabled. The proportion of school-age disabled children showed steady growth between 1991 and 1995 (see Figure 1-6). Alaska and Oregon report the highest proportion of disabled students, 12.2 percent and 11.2 percent respectively. Idaho reports the lowest at 8.5 percent.

**Figure 1-6**
**Change in the Proportion of School-Age Children Who Are Disabled in the Northwest, 1991 to 1995**




Data Source: 1991 data from Table 54. "Number of children served under Individuals with Disabilities Education Act and Chapter 1...", *Digest of Educational Statistics*, 1994. 1995 data from Table 55 "Number of children served under Individuals with Disabilities Education Act and Chapter 1" *Digest of Educational Statistics*, 1997. NCES.

Perhaps no other single factor has had such an impact on teacher preparation or professional development as the "full-inclusion" movement. No longer are students being removed from regular classrooms for special education services from specialists. Rather, all teachers must develop the skills to work collaboratively with consultants, and to teach to a wider range of cognitive and physical abilities within the classroom. Unpublished findings from the 1997 NWREL regional needs assessment LEA survey suggest that a number of teachers and administrators feel overwhelmed by the challenges of inclusion and are frustrated by the lack of preparation they had for full-inclusion classrooms.

## Summary

- Enrollments in the region have been growing, and are expected to continue. More than a quarter of a million new students have been added since 1990. The growing enrollments increase demand for more teachers.
- Growth in enrollment was highest in medium-size cities, suburbs, and some rural areas as the strong economies in these areas drew people from other parts of the region and the country.
- School-district size in the region varies from 10 to more than 50,000 students. District size influences the types of resources teachers have available to support their teaching and professional development.
- School size in the region varies from a few to 2,500 students. Most schools in the Northwest are larger than what is considered optimal size for creating a climate of connection, support, and collaboration between and among teachers and among students.
- More than 20 percent of Northwest schools have fewer than 100 students. Teachers in these schools are required to teach across a wide variety of subject areas.
- More than 700 districts are in remote locales where teachers have little access to networking and professional development opportunities, teaching resources, and support services for students.
- Poverty tends to be concentrated in the Northwest. One out of five schools have 20 percent or more students living in poverty. Teachers in these schools must understand the culture of poverty and be prepared to provide the supports and structure for learning, and the learning opportunities that are often lacking in the home lives of poor children.
- While the proportion of minority students in the Northwest is smaller than for the United States as a whole, it has been growing more rapidly than the U.S. average. By the year 2000, more than one out of five students will be minority. Minorities tend to be concentrated in certain locales. Many Northwest teachers are poorly prepared to teach in a multicultural environment.
- Urban schools have been experiencing a growing number of LEP students. Some schools have more than 15 languages and dialects represented. National data indicates that less than one-third of teachers who have LEP students have had special training to work with these students.
- The proportion of students with disabilities in the Northwest has been growing steadily. Full inclusion has been introduced in many Northwest schools with little or no training or preparation for teachers.

# THE TEACHING WORKFORCE

**The following questions suggest the focus on the teacher workforce:**

- **What does the current teacher workforce look like?**
- **What is affecting the supply of the teacher workforce?**
- **What is the projected teacher demand in 2005?**

## The Current Workforce

Teachers are recognized as the key to improved student learning, and much discussion centers on transforming their roles in the classroom. Recommendations for change in the teacher workforce must take into account the characteristics of the current teaching workforce. This section addresses two aspects: First, the demography of the teacher workforce, and, second, teacher supply and demand.

### Demographics

**Numbers.** The most recently available figures show that in 1994-95, there were more than 100,000 teachers in the Northwest region(See Table 2-1). Since 1991-92, the total number of teachers has increased in all Northwest states except Oregon. Oregon showed decreases at both elementary and secondary levels, losing 2 percent, or more than 500 teachers, despite increasing enrollments. Although the total number of teachers in Alaska has increased since 1991, elementary schools lost teachers while secondary schools gained.

**Table 2-1**

**Public School Elementary and Secondary Teachers by State, Fall 1991 and Fall 1994**

| | 1991-92 | | | 1994-95 | | | % change 1991-92 to 1994-95 | | | Change in |
|---|---|---|---|---|---|---|---|---|---|---|
| State | Elem. | Second. | Unclass. | Elem. | Second. | Unclass. | Elem. | Second. | Unclass. | Number |
| Alaska | 5,099 | 2,019 | | 4,666 | 2,539 | | -8% | 26% | | 87 |
| Idaho | 6,045 | 5,466 | 115 | 6,388 | 6,018 | 176 | 6% | 10% | 53% | 956 |
| Montana | 6,901 | 2,982 | | 7,009 | 3,070 | | 2% | 3% | | 196 |
| Oregon | 16,056 | 9,799 | 890 | 14,128 | 8,484 | 3,596 | -12% | -13% | 304% | -537 |
| Washington | 23,271 | 16,357 | 3,303 | 24,077 | 18,247 | 4,115 | 3% | 12% | 25% | 3,508 |
| Region | 57,372 | 36,623 | 4,308 | 56,268 | 38,358 | 7,887 | -2% | 5% | 83% | 4,210 |
| U.S. | 1,358,090 | 918,847 | 155,306 | 1,419,351 | 912,386 | 220,463 | 5% | -1% | 42% | 119,957 |

Data Source: Table 64. *Digest of Education Statistics*, 1994 and 1996, NCES.

**Age.** The teaching workforce in the Northwest is aging. Teachers over age 50 (those reaching retirement age by 2005) make up 22 percent of the elementary teaching force and over 25 percent

of the secondary teaching force in the Northwest region. Teachers under 30 years old represent less than 10 percent of teachers at both the elementary and secondary levels (see Tables 2-2 and 2-3).

**Table 2-2**

**Percentage of Public ELEMENTARY School Teachers by Age, by State 1993-94**

| State | Under 30 years | 30 to 50 years | 50 to 55 years | Over 55 years |
|---|---|---|---|---|
| **Alaska** | 4.6 | 77.4 | 12.8 | 5.3 |
| **Idaho** | 12.3 | 69.8 | 6.8 | 11.1 |
| **Montana** | 10.5 | 70.9 | 11.9 | 6.8 |
| **Oregon** | 4.0 | 71.4 | 15.7 | 8.9 |
| **Washington** | 11.8 | 65.2 | 15.3 | 7.7 |
| **Region** | 9.1 | 69.0 | 13.8 | 8.1 |
| **U. S.** | 11.5 | 64.6 | 12.4 | 11.5 |

Data Source: Table 2.1, *SASS by State,* NCES.

Oregon has the largest percentage (24.6 percent) of elementary teachers over age 50, and Idaho the smallest percentage (17.9 percent). Oregon has the largest percentage (29 percent) of secondary teachers over age 50, and Alaska has the smallest (18.1percent).

**Table 2-3**

**Percentage of Public SECONDARY School Teachers by Age, by State 1993-94**

| State | Under 30 years | 30 to 50 years | 50 to 55 years | Over 55 years |
|---|---|---|---|---|
| **Alaska** | 3.9 | 78.0 | 13.2 | 4.9 |
| **Idaho** | 10.9 | 66.2 | 13.6 | 9.3 |
| **Montana** | 10.3 | 69.2 | 13.4 | 7.0 |
| **Oregon** | 6.5 | 64.4 | 17.4 | 11.6 |
| **Washington** | 7.7 | 66.2 | 18.3 | 7.9 |
| **Region** | 7.9 | 66.8 | 16.6 | 8.7 |
| **U. S.** | 10.3 | 63.7 | 15.4 | 10.6 |

Data Source: Table 2.2, *SASS by State,* NCES.

**Race/Ethnicity.** The teaching workforce does not reflect the student minority composition in the Northwest. While almost one out of five students is minority, only one out of 20 teachers is. The proportion of minority teachers on average decreased in the Northwest between 1990 and 1993. Alaska had 13 percent minority elementary teachers in 1993-94; this nearly matched the national average of 14 percent. Idaho, Washington, and Alaska had no growth in the percentage of minority teachers from 1990-91 to 1993-94. In Oregon and Montana the percentage decreased.

In the Northwest, the percentages of minority teachers of either gender in science and math were low, or too small to compute (see Table 2-4). Washington and Alaska had the highest percentages of minority teachers in math, 7 percent and 11 percent, respectively, as well as the highest percentages in science, 10 percent and 6 percent, respectively. Oregon, Montana, and Idaho had little minority presence in those areas.

**Table 2-4**

**Percentage of Public ELEMENTARY School Teachers Who Are Minority, by State 1990-1991 and 1993-94**

| State | % Minority 1990-91 | % Minority 1993-94 |
|---|---|---|
| **Alaska** | **13** | **13** |
| **Idaho** | **2** | **2** |
| **Montana** | **8** | **4** |
| **Oregon** | **6** | **4** |
| **Washington** | **6** | **6** |
| **Region** | **6** | **5** |
| **U.S.** | **14** | **14** |

Data Source: *SASS by State*, NCES, 1990-91.

In 1994-95 regional estimates, 4.8 percent of Northwest public school teachers were minority; a figure substantially lower than the 13.5 percent national average (see Table 2-5 and Figure 2-1). Alaska had the greatest percentage of minority teachers, 10.7 percent, with 5.4 percent representing Alaska Natives/Native Americans. Washington followed with 5.1 percent minority teachers, of which 2 percent are Asian/Pacific Islander. Idaho had the lowest minority representation at 2.4 percent.

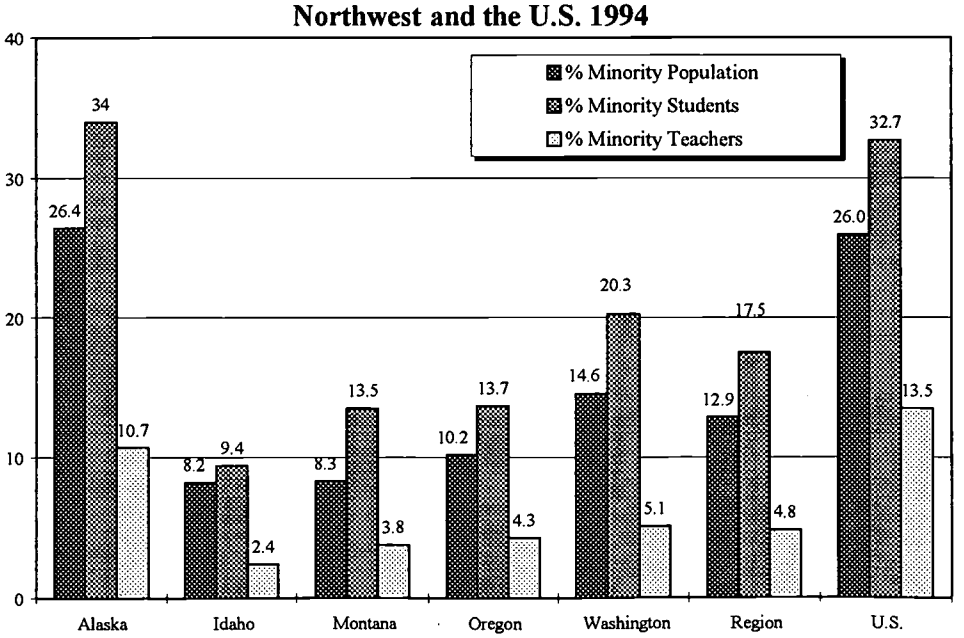
## Table 2-5

**Total Public Elementary and Secondary School Teachers, by Race/Ethnicity, 1994-95 (Est.)**

| | Total Number Of Teachers | White | | Black | | Hispanic | | AK Nat/ Nat.Amer | | Asian/Pac.Is | | All Minority | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | N | % | N | % | N | % | N | % | N | % | N | % |
| AK | 7,205 | 6,434 | 89.3% | 101 | 1.4% | 173 | 2.4% | 389 | 5.4% | 108 | 1.5% | 771 | 10.7% |
| ID | 12,582 | 12,280 | 97.6% | - | - | 189 | 1.5% | 25 | 0.2% | 101 | 0.8% | 302 | 2.4% |
| MT | 10,079 | 9,696 | 96.2% | - | - | 81 | 0.8% | 252 | 2.5% | 40 | 0.4% | 383 | 3.8% |
| OR | 26,208 | 25,081 | 95.7% | 131 | 0.5% | 577 | 2.2% | 157 | 0.6% | 262 | 1.0% | 1,127 | 4.3% |
| WA | 46,439 | 44,071 | 94.9% | 232 | 0.5% | 743 | 1.6% | 464 | 1.0% | 929 | 2.0% | 2,368 | 5.1% |
| NW | 102,513 | 97,562 | 95.2% | 464 | 0.5% | 1,762 | 1.7% | 1,288 | 1.3% | 1,440 | 1.4% | 4,951 | 4.8% |
| U.S. | 2,586,497 | 2,237,320 | 86.5% | 191,401 | 7.4% | 108,633 | 4% | 20,692 | 0.8% | 28,451 | 1.1% | 349,177 | 13.5% |

Data Source: Percent minority teachers from USDE, NCES, 1993-94 Schools and Staffing Survey, "Teacher Questionnaire." Total number of teachers in 1994-95 from *Digest of Education Statistics,1996,* NCES.

**Figure 2-1**
**Percent Minority Population, Minority Students and Minority Teachers, Northwest and the U.S. 1994**



**Gender.** Historically, teaching has been a female-dominated profession, and continues to be so. In 1993-94 almost 84 percent of the nation's elementary teachers and over 53 percent of its secondary teachers were female. The Northwest teaching force has a lower percentage of female teachers at both levels (see Table 2-6).

**Table 2-6**

**Percentage of Female Teachers, by Level of School, by State 1993-94**

| State | Elementary | Secondary | Combined |
|---|---|---|---|
| Alaska | 78.0 | 45.6 | 58.5 |
| Idaho | 80.3 | 47.2 | 68.2 |
| Montana | 79.0 | 44.9 | n/a |
| Oregon | 71.2 | 41.6 | 65.6 |
| Washington | 79.0 | 44.9 | 61.0 |
| Region | n/a | n/a | n/a |
| U.S. | 83.8 | 53.1 | 67.9 |

Data Source: Table 2.14 *SASS by State*, NCES. Data is based on a sample survey

The vast majority of female teachers have assignments in kindergarten or general elementary classes, English, special education, and bilingual/ESL (NCES,1993-94). Typically, male teachers have assignments in secondary schools, with a particularly heavy concentration of males in the areas of science and math. On the other hand, the percentage of female science teachers in the Northwest region is substantially below the national average and has not shown much increase since 1990—except in Washington (an increase from 25 percent to 39 percent). The Northwest states have been more successful at increasing the number of female math teachers. Three states—Alaska, Idaho, and Montana—showed a substantial increase in the proportion of female math teachers in its teaching force by 1993. However, all Northwest states were still significantly below the national average (51 percent) for female math teachers (see Table 2-7).

**Table 2-7**

**Percentage of Public Secondary School Science and Mathematics Teachers Who Are Female, by State 1990-91 and 1993-94**

| | Female SCIENCE Teachers | | Female MATH Teachers | |
|---|---|---|---|---|
| State | 1990-91 | 1993-94 | 1990-91 | 1993-94 |
| **Alaska** | 15 | 17 | 27 | 37 |
| **Idaho** | 24 | 23 | 35 | 42 |
| **Montana** | 18 | 15 | 33 | 31 |
| **Oregon** | 25 | 24 | 29 | 23 |
| **Washington** | 25 | 39 | 24 | 35 |

Data Source: Table 2.10 *SASS by State*, NCES. Data is based on a sample survey

## Teacher Qualifications

Two factors with implications for teaching quality are level of education or highest degree earned and years of teaching experience. As reported for 1993-94, almost 59 percent of all Northwest teachers had a bachelor's degree and 35 percent held master's degrees. The U.S. average for master's degrees is 42 percent (See Table 2-8).

**Table 2-8**

**Percent Distribution of Teachers by Highest Degree Earned 1993-94**

| State | % Less than Bachelor's | % Bachelor's | % Master's | % Ed. Specialist | % Ph.D. or Prof. Degree |
|---|---|---|---|---|---|
| **Alaska** | 1.2 | 59.0 | 35.3 | 4.2 | 0.2 |
| **Idaho** | 0.8 | 74.4 | 21.7 | 2.6 | 0.6 |
| **Montana** | 0.4 | 71.3 | 26.0 | 1.8 | 0.5 |
| **Oregon** | 0.6 | 51.5 | 43.1 | 4.0 | 0.8 |
| **Washington** | 1.6 | 56.3 | 37.5 | 3.6 | 1.0 |
| **Region** | 1.1 | 58.9 | 35.8 | 3.5 | 0.8 |
| **U. S.** | 0.7 | 52.0 | 42.0 | 4.6 | 0.7 |

Data Source: Table A13, *Schools and Staffing in the United States: A Statistical Profile, 1993-94,* NCES.

At 43.1 percent, Oregon has the highest percentage of teachers with master's degrees in the Northwest, and Idaho has the lowest with 21.7 percent. Slightly more than 1 percent of Northwest teachers have less than a bachelor's degree.

As of 1993, over two-thirds of the teachers in the Northwest had 10 or more years of teaching experience. One quarter had more than 20 years of experience. Almost 10 percent had been teaching fewer than three years (see Table 2-9). At an average of 14.3 years teaching experience, the teaching workforce in the Northwest is slightly less experienced than the national average (15.2 years).

**Table 2-9**

**Percent Distribution of Teachers by Years of Teaching Experience 1993-94**

| State | Less than 3 years | 3 to 9 years | 10 to 20 years | Over 20 years | Average Years Teaching |
|---|---|---|---|---|---|
| **Alaska** | 8.0 | 29.3 | 42.7 | 20.0 | 13.7 |
| **Idaho** | 12.4 | 33.3 | 33.7 | 20.6 | 12.9 |
| **Montana** | 11.1 | 27.5 | 39.0 | 22.5 | 14.0 |
| **Oregon** | 7.4 | 27.0 | 39.6 | 26.0 | 15.4 |
| **Washington** | 10.8 | 30.1 | 32.2 | 26.9 | 14.3 |
| **Region** | 9.9 | 29.4 | 35.7 | 25.0 | 14.3 |
| **U. S.** | 9.7 | 25.5 | 35.0 | 29.8 | 15.2 |

Data Source: Table 67, *Digest of Education Statistics,* 1996, NCES.

Although the majority of the nation's teachers are experienced teachers who continue to teach from year to year, teacher turnover and growing enrollments mean that schools will have new hires each year, some of whom will be first-time teachers. The number of newly hired teachers has continued to increase somewhat from 1990 to 1993 (see Table 2-10). Nationally, in 1990-91, nine percent of the teacher workforce was new hires. This increased to 11.5 percent in 1993-94.

**Table 2-10**

**Percentage of Full-time Public School Teachers Who Were Newly Hired and Percentage of Newly Hired Who Were First-Time Teachers, by State, 1993-94**

| | Newly Hired Teachers | | Newly Hired First-Time Teachers | |
|---|---|---|---|---|
| **State** | **1990-91** | **1993-94** | **1990-91** | **1993-94** |
| **Alaska** | 17.0 | 14.0 | 34.0 | 18.9 |
| **Idaho** | 16.0 | 11.5 | 38.0 | 43.6 |
| **Montana** | 11.0 | 12.6 | 39.0 | 35.7 |
| **Oregon** | 10.0 | 11.8 | 36.0 | 16.4 |
| **Washington** | 11.0 | 11.8 | 48.0 | 32.6 |
| **Region** | 11.7 | 12.0 | 41.3 | 28.9 |
| **U. S.** | 9.0 | 11.5 | 39.0 | 34.9 |

Data Source: Table 2.3, *SASS by State*, NCES.

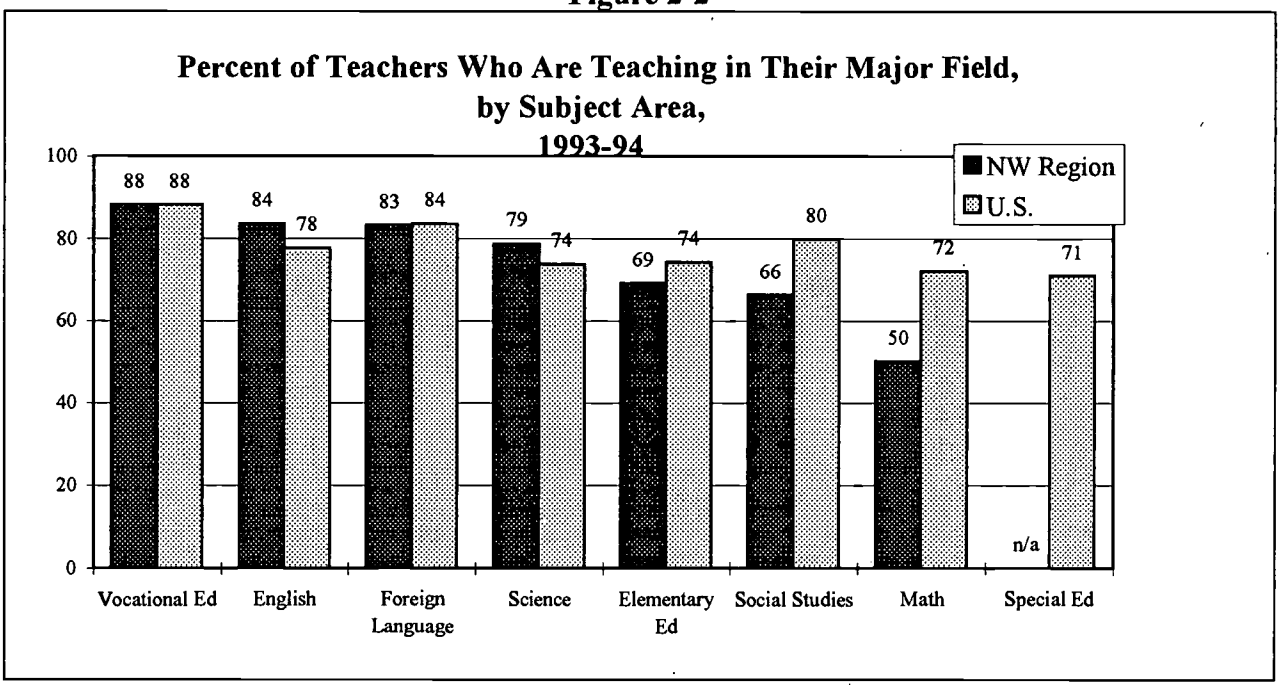
The Northwest had a higher percentage of new hires than the national average in both years. Alaska had the largest percentage of new hires in 1993-94 at 14 percent. Of the newly hired, over a third of those in each state were first-time teachers in 1990-91. By 1993-94, the percentage of newly hired teachers that were first-time teachers had decreased in four of the five NWREL states, whereas in Idaho it increased. In Oregon and Alaska less than 20 percent of new hires were

first-time teachers. In Idaho more than two out of five new hires (43.6 percent) were first-time teachers.

### Teacher Assignment

Overall training and experience can be good measures of teacher quality, but only when teachers are assigned to positions appropriate to that training and experience. Unfortunately, too many teachers are assigned to areas for which they are not properly prepared. This is especially true in math, social studies, and elementary education assignments in Northwest schools (see Figure 2-2).

**Figure 2-2**




Data Source: Tables 3.4-3.10, *SASS by State: Schools and Staffing Survey*, 1993-94, NCES.

While such statistics speak more to how teachers are assigned than how they are prepared, it remains true that too large a proportion of public school teachers are teaching in areas in which they are not properly prepared, specifically in science and mathematics. Similarly, it appears that as qualified teachers in various subject fields become more difficult to find, a smaller percentage teach in those fields with a major in their main teaching assignment.

The 1997 NCES report, *American's Teachers: Profile of a Profession* (p.36), indicated that the larger the percentage of low-income students in a school, the less likely it was for teachers' main assignments to be in a fields in which they were best qualified.

## Teacher Longevity

The 1993-94 *Schools and Staffing Survey* showed there was a substantial increase over the 1990-91 survey in the percentage of teachers who were undecided about whether they would remain in teaching, and the percentage of those who planned to leave the profession increased (see Table 2-11). These national trends were also reflected in the Northwest, where there was a decrease in the percentage of teachers planning to stay until retirement. More than half planned to stay while they were able or until retirement. More than a third planned to leave, would wait for a better offer, or were undecided.

**Table 2-11**

**Percentage of Public School Teachers by Their Plans to Remain in Teaching, by State, 1993-94**

| State | While Able | | Until Retirement | | Until Better Offer | | Plan to Leave | | Undecided | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1990-91 | 1993-94 | 1990-91 | 1993-94 | 1990-91 | 1993-94 | 1990-91 | 1993-94 | 1990-91 | 1993-94 |
| **Alaska** | 36 | 32 | 39 | 30 | 8 | 9 | 2 | 4 | 15 | 26 |
| **Idaho** | 32 | 29 | 40 | 36 | 14 | 12 | 2 | 6 | 13 | 18 |
| **Montana** | 36 | 32 | 35 | 26 | 12 | 14 | 2 | 4 | 14 | 25 |
| **Oregon** | 32 | 27 | 43 | 39 | 13 | 12 | 3 | 5 | 10 | 17 |
| **Washington** | 25 | 28 | 45 | 33 | 11 | 12 | 4 | 6 | 15 | 22 |
| **Region** | 30 | 29 | 42 | 34 | 12 | 12 | 3 | 5 | 13 | 21 |
| **U.S.** | 35 | 33 | 39 | 32 | 10 | 10 | 3 | 4 | 13 | 21 |

Data Source: Table 2.4, *SASS by State*, NCES.

National projections indicate that 24 percent of teachers will reach retirement age by 2005 (see Table 2-12). The rate of potential retirees in the Northwest is slightly lower at 22 percent. Although percentages vary for the states, Oregon (25 percent) and Washington (23 percent) will face considerable turnover in the teaching force.

**Table 2-12**

**Teachers Reaching Retirement Age by 2005**

| State | Total Teaching Force in 1995 [1] | Percent of Teachers reaching Retirement Age by 2005 [2] | Number of Teachers Reaching Retirement Age by 2005 [2] |
|---|---|---|---|
| **Alaska** | 7,421 | 18% | 1,343 |
| **Idaho** | 12,780 | 18% | 2,288 |
| **Montana** | 10,100 | 19% | 1,889 |
| **Oregon** | 26,679 | 25% | 6,563 |
| **Washington** | 45,345 | 23% | 10,429 |
| **Region** | 102,325 | 22% | 22,512 |
| **U. S.** | 2,586,497 | 24% | 618,173 |

Data Source: [1]Table 64, *Digest of Education Statistics*, 1996, NCES. [2]Teachers reaching retirement age (age 62) by 2005 from Tables 2.1 and 2.1, *SASS by State*, 1993-94.

## Growing Teacher Demand

By 2005, student enrollments are expected to increase by 8.3 percent for the Northwest, and the teaching force attrition will be 27 percent (see Table 2-13). More than 35,900 new hires will be needed throughout the region.

**Table 2-13**

**Northwest: New Teacher Demand by 2005***

| | Total Teaching Force in 1995 | Percent of Teachers Reaching Retirement Age by 2005[1] | Percent of Who Plan to Leave Teaching (1993-94)[2] | Percent of New Teachers Needed for Projected Enrollment Increase by 2005 [3] | Total New Hires Needed by 2005* |
|---|---|---|---|---|---|
| **Region** | 102,325 | 22.0% | 5.0% | 8.3% | 35,926 |
| **U.S.** | 2,586,497 | 23.9% | 4.2% | 4.3% | 838,218 |

[1] Teachers retiring at age 62 and older. Calculated using data from Tables 2.1 and 2.2 *SASS by State* - 1993-94, and Table 64, *Digest of Education Statistics 1996*, NCES.

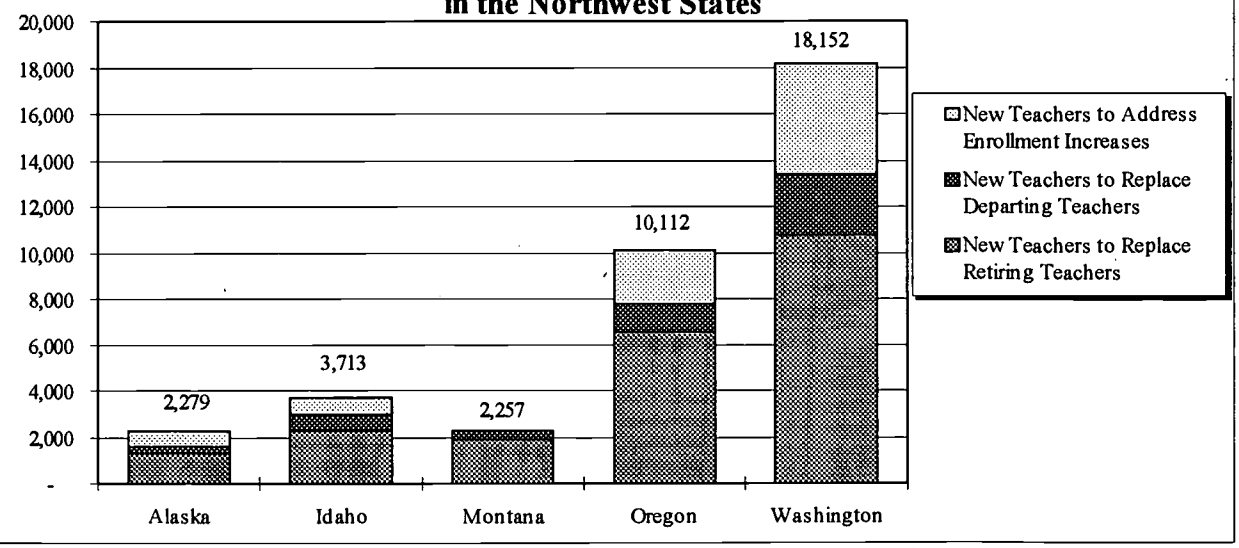
[2] Table 2.4. *SASS by State*, 1993-94, NCES. Percent of teachers in 1993-94 who said they plan to leave teaching.

[3] *Projections of Education Statistics to 2006: 25th Ed.*, NCES. Enrollment projections 1997-2005. This projection assumes that class size and other factors affecting teacher demand do not change.

* Teacher demand estimates were made taking into account the number of potential teacher retirements, the number of teachers planning to leave the profession for other reasons, and student enrollment projections.

Figure 2-3 shows projected teacher demand for each of the five NWREL states.

**Figure 2-3**
**New Teacher Hires Needed by 2005 to Replace Retiring and Departing Teachers, and to Address Student Enrollment Increases in the Northwest States**




Teachers retiring at age 62 and older. Calculated using data from Tables 2.1 and 2.2, *SASS by State*, 1993-94, and Table 64, *Digest of Education Statistics 1996*, NCES.

Table 2.4, *SASS by State*, 1993-94, NCES. Percent of teachers in 1993-94 who said they plan to leave teaching.

*Projections of Education Statistics to 2006: 25th Ed.*, NCES. Enrollment projections 1997-2005. This projection assumes that class size and other factors affecting teacher demand do not change.

The overall picture of teacher supply and demand suggests that some states will produce more teachers than they need while others will not (see Table 2-14).

**Table 2-14**

**Teacher Demand and Supply in the Region and U.S. by 2005**

| | Total New Hires Needed by 2005 | Estimated New Teachers Produced by 2005 * | Percent of Teaching Force Need that Will Be Met at Current Teacher Production Rates | Excess or (Shortage) |
|---|---|---|---|---|
| Alaska | 2,292 | 2,930 | 128% | 638 |
| Idaho | 3,712 | 8,260 | 223% | 4,548 |
| Montana | 2,262 | 7,020 | 310% | 4,758 |
| Oregon | 10,112 | 6,530 | 65% | (3,582) |
| Washington | 17,548 | 15,830 | 90% | (1,718) |
| Region | 35,926 | 40,570 | 113% | 4,644 |
| U.S. | 838,218 | 1,060,790 | 127% | 222,572 |

* Estimates are based on the current rate of graduation with a bachelor's in education, and assumes that all graduates take teaching jobs; the jobs are in the state of graduation; and teachers are not recruited from other states.
Data Source: *Integrated Postsecondary Education Data System, 1995* and *SASS by State*, 1993-94, NCES.

Given the estimated number of teachers needed, Oregon is projected to have a 35 percent shortage, and Washington will have a 10 percent shortage—unless they recruit from other states. Across the region, there will be slightly more teachers (13 percent) produced than there are full-time positions to fill. Alaska, Idaho, and Montana are projected to produce more teachers than there will be vacancies, with Montana producing over 300 percent more than needed. This does not mean, however, that the Northwest will have an oversupply of new teachers, because:

- Data on education degrees awarded does not indicate how many graduates are potential "new teachers" versus education graduates who were already teaching while they completed their advanced degrees.
- Certified teachers will be needed to serve as substitute teachers.
- Teacher shortages will continue to exist in certain subject areas.
- Some localities, central city and isolated rural schools in particular, traditionally face difficulties recruiting qualified teachers because of undesirable teaching conditions or remote locations.
- While the NCES data used to determine demand is reported in FTEs (full-time equivalents), not all positions are full-time positions. Two or more teachers may be needed to fill one "full-time equivalent position."
- The demand from other states for Northwest teachers, California in particular, has grown considerably and is not expected to abate for a while.
- As long as the Northwest economy remains strong, schools will be competing heavily with the private sector for education graduates, often at a salary disadvantage.

A comparison of total teachers available versus teachers needed provides an incomplete picture of demand. Vacancies occur unevenly in the elementary and secondary levels as well as in specialty or otherwise difficult to fill subjects. In the Northwest, state certification officers report those vacancy types that are most difficult to fill with qualified teachers. Special education teachers are generally in short supply in Alaska, Idaho, and Washington. Idaho and Washington both list unfilled vacancies in music and technology education. Idaho and Alaska list speech pathology. Other areas include school counselor, foreign language, mathematics, and physical education.

### Minority Teacher Demand and Supply

Another important consideration in the supply and demand issue is the increasing diversity of the region's population. Projections for 2005 indicate that there will be shortages of minority teachers in all of the Northwest states when taking into account minority teachers needed to reflect racial and ethnic balance in relation to student population (see Table 2-15). All states will meet some portion of the minority teacher need, but not all.

**Table 2-15**

**Minority Teacher Demand and Supply in the Region and U.S. by 2005**

| | Additional Minority Teachers Needed by 2005 to Reflect Ethnic/Racial Balance of Students | Estimated Minority Teachers Produced by 2005* | Percent of Minority Teaching Force Need That Will be Met by 2005 | Excess or (Shortage) |
|---|---|---|---|---|
| Alaska | 2,146 | 510 | 24% | (1,636) |
| Idaho | 1,037 | 220 | 21% | (817) |
| Montana | 1,066 | 210 | 20% | (856) |
| Oregon | 3,167 | 380 | 12% | (2,787) |
| Washington | 8,466 | 1,110 | 13% | (7,356) |
| Region | 15,882 | 2,430 | 15% | (13,452) |
| U.S. | 631,158 | 121,480 | 19% | (509,678) |

Estimates are based on the current rate of minority graduation with a bachelors in education, and assumes that all graduates take teaching jobs; the jobs are in the state of graduation; and teachers are not recruited from other states.
Data Source: *Integrated Postsecondary Education Data System, 1994* and *SASS by State*, 1993-94, NCES

## Summary

- By the year 2005, student enrollments are expected to increase by 8 percent, while the teaching force attrition is projected to be 27 percent.
- The size of the teaching workforce in the Northwest region has increased since the early 1980s.
- The majority of public school teachers are between the ages of 30 and 50 years.
- Almost 25 percent of the teachers over the age of 50 are projected to retire by the year 2005.
- Ninety-five percent of public school teachers in the region are White and are predominantly female.
- Minority representation in public school teachers is less than the proportion of the minority student population, particularly at the secondary level.
- Most teachers in the region have a bachelor's or a master's degree.
- The majority of the Northwest teachers are experienced and continue to teach from year to year, with only a small percentage of newly hired teachers being added per year.
- More than two thirds of the teachers in the Northwest have 10 or more years of teaching experience.
- The percentage of teachers who are undecided about remaining in the profession has substantially increased.
- There are predicted shortages of minority teachers for all of the Northwest states, particularly when taking into account the need to reflect racial/ethnic balance in relation to student populations.

# TEACHER PREPARATION AND CERTIFICATION

**The following questions suggest the focus of this section:**

**Preparation:**

- **Who is in the pipeline?**
- **How many institutions are preparing teachers in the Northwest? How many meet national standards National Council for Accreditation of Teacher Education for accreditation?**
- **How many teachers are being prepared, in what fields, and with what degrees?**

**Certification:**

- **What is the status of the certification of teachers, both elementary and secondary, in the Northwest?**
- **What is the status of alternative certification in the Northwest?**
- **What is the status of advanced certification in the Northwest?**

## Introduction

Schools, colleges, and departments of education are essentially organized around two models: The "normal school" model and the "professional school" model. The "normal school" model, in which the majority of elementary and secondary school teachers are prepared, was established in the university setting in the late 1940s and continues to provide liberal arts and content knowledge preparation within the context of an education major. The central focus of this "normal school" focus is pedagogy and professionalization. Recently, the "professional school" model has placed greater emphasis on content knowledge as the basis of educational preparation. This model is particularly prevalent in the preparation of secondary-level teachers. Still another model stresses the completion of an undergraduate liberal arts degree in the context of an extended program in teacher preparation either in a fifth year or at the graduate level. Teacher preparation models have developed that stress an "academic" major and/or minor in a specific content area. Neither state, regional, nor national accrediting agencies express a preference for any of these models.

Currently more than two and a half million teachers are employed in the United States—an estimated 104,000 in the Northwest. By the year 2005, new teachers equivalent in number to more than one-third of the current teaching workforce will be needed to replace retiring and departing teachers, as well as student enrollment increases. But what is of more significance is the fact that America's school system has expanded enormously since World War II and now serves the needs of a huge range of students. This increased diversity has created many opportunities—but also many dilemmas—and debates now rage over how to distribute resources and design curricula to meet the needs of students from diverse backgrounds, with many different skills and

interests. Problems such as these *must* be addressed if Americans are to design a school system that truly provides high standards and equal opportunities for all students. (Berliner & Biddle, p. 5).

Accordingly, graduates of teacher training programs, as well as former teachers who reenter the profession, will need to sharpen and broaden their skills to teach to new reform standards, understand the new technologies for increasing student learning, and learn new ways to involve parents and the community in the learning process. Unfortunately, according to a number of national commissions, foundations, and consortia, adequate teacher preparation and professional development opportunities are too few and far between; they warn that without quality teachers and teaching practices, even the most promising school reform and improvements will not succeed. (cf. The National Commission on Teaching and America's Future report, "What Matters Most: Teaching for America's Future" [1996]; The National Foundation for the Improvement of Education report, "Teacher Take Charge of Their Learning: Transforming Professional Development for Student Success [1996]; and The Holmes Group reports on "Tomorrow's Teachers [1986]," "Tomorrow's Schools [1995]," and "Tomorrow's Schools of Education [1996]").

Several findings from The National Commission on Teaching and America's Future (1996) reveal critical considerations.

- More than 12 percent of all newly hired "teachers" enter the work force without any teacher training at all, and another 14 percent enter without fully meeting state standards. About a fourth of the teaching work force lacks even minimal professional certification.
- Annually, more than 50,000 people who lack the required training have entered teaching on emergency or provisional certificates.
- Of the nation's 1,200 teacher education programs, only 500 meet common professional standards.
- In the Northwest region, only 22 of the 57 teacher education programs meet the standards set by the NCATE.
- The percentage of all teachers who have studied child development, learning methods, teaching methods, have degrees in their subject areas, and have passed state licensing requirements declined from 74 percent in 1987 to 67 percent in 1991.
- Nearly one-fourth of all secondary teachers do not have a college major or minor in their main teaching field, including 30 percent of the mathematics teachers.

Many education leaders have called for sweeping changes in the content and structure of undergraduate and graduate teacher preparation policies and programs.

## Teacher Preparation

### Who's in the Pipeline?

The cadre of potential applicants to teacher preparation is not readily identifiable simply by looking at college undergraduate enrollment data, because:

1. Programs based on the "normal school" model tend to recruit teacher applicants as entering freshmen (directly out of high school).
2. "Professional school" programs recruit students from among the cohort of liberal arts students completing their general education (core curriculum) after their freshman or sophomore year.
3. In response to mid-career change decisions, a growing percentage of "nontraditional" students (25 years of age and older) are entering teacher preparation programs.

Tables 3-1 and 3-2 show the numbers of degrees and certificates in education awarded in the Northwest region. It is not known how many of these graduates, especially those at the master's level, represent "new teachers" versus those already teaching who have returned for their certificate or advanced degree.

**Table 3-1**

**Bachelor's Degree and Certificates in Education***

| | Total Bachelor's Degrees in Ed 1990-91 | Total Bachelor's Degrees in Ed 1994-95 | Change in Bachelor's Degrees in Ed. 1990-95 |
|---|---|---|---|
| Alaska | 208 | 293 | 85 |
| Idaho | 636 | 826 | 190 |
| Montana | 750 | 702 | -48 |
| Oregon | 1,219 | 653 | -566 |
| Washington | 1,652 | 1,583 | -69 |
| Region | 4,465 | 4,057 | -408 |
| U.S. | 111,013 | 106,079 | -4,934 |

Data Source: Table 2.9, *SASS by State,* and NCES correspondence.

* Includes administration and central office support staff degrees

**Table 3-2**

| Master's Degrees and Certificates in Education* | | | |
|---|---|---|---|
| | Total Master's Degrees in Ed 1990-91 | Total Master's Degrees in Ed 1994-95 | Change in Master's Degrees in Education 1990-95 |
| Alaska | 101 | 160 | 59 |
| Idaho | 351 | 421 | 70 |
| Montana | 297 | 220 | -77 |
| Oregon | 1,354 | 1,422 | 68 |
| Washington | 1,471 | 3,320 | 1,849 |
| Region | 3,574 | 5,543 | 1,969 |
| U.S. | 88,992 | 101,238 | 12,246 |

Data Source: Table 2.9, *SASS by State*, and NCES correspondence.

* Includes administration and central office support staff degrees

Note: While the number of bachelor's degrees awarded in education in the Northwest decreased almost 10 percent between 1990-91 and 1994-95, the number of master's degrees increased 55 percent! This shift may reflect a fundamental change in the model used for teacher preparation programs in many colleges. In response to recommendations by the Carnegie Forum and the Holmes Group, many "professional schools" now require prospective secondary teachers to obtain their bachelor's degree in a subject field, and then earn their teaching certification in a fifth-year master's degree program.

Table 3-3 shows the distribution of degrees by area of specialization.

**Table 3-3**
**PreK-12 Teaching Degrees Conferred in the Northwest in 1994**

| Bachelor's Degrees and Certificates | Total | Percent |
|---|---|---|
| Elementary | 1,639 | 40% |
| Secondary | 1,895 | 47% |
| General Education, Multiple Levels & Other | 229 | 6% |
| Curriculum & Instruction | 0 | 0% |
| Special Education | 169 | 4% |
| Bilingual/ESL | 19 | 0% |
| Pre-Elementary | 100 | 2% |
| **TOTAL** | **4,051** | |

Data source: Integrated Postsecondary Education Data System database, NCES. 1995

**continued on page 31**

**Table 3-3 (continued)**

| Master's Degrees and Certificates | Total | Percent |
|---|---|---|
| Elementary | **341** | **8%** |
| Secondary | **943** | **23%** |
| General Education, Multiple Levels & Other | **1,268** | **32%** |
| Curriculum & Instruction | **1,063** | **26%** |
| Special Education | **298** | **7%** |
| Bilingual/ESL | **85** | **2%** |
| Pre-Elementary | **21** | **1%** |
| **TOTAL** | **4,019** | |

Data source: Integrated Postsecondary Education Data System database, NCES. 1995

The total number of education degrees awarded each year in the region grew steadily between 1991 and 1995 (see Table 3-4).

**Table 3-4**

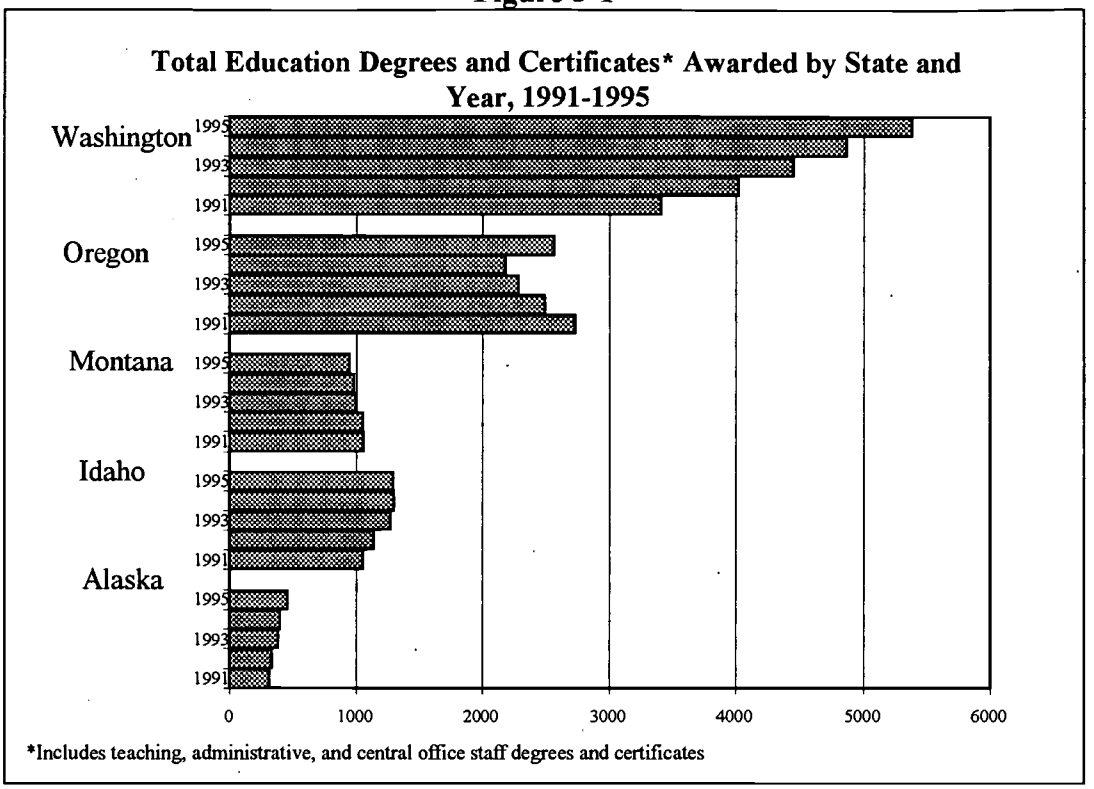
**Education Degrees and Certificates Awarded in the Northwest, 1991 to 1995**

| Year | Degrees |
|---|---|
| 1991 | 8,479 |
| 1992 | 9,031 |
| 1993 | 9,398 |
| 1994 | 9,721 |
| 1995 | 10,134 |

Data source: Integrated Postsecondary Education Data System database, NCES. 1995

However, this same trend is not reflected in all of the Northwest states (see Figure 3-1). For example, in Montana the number of degrees awarded decreased by 11 percent. In Oregon, degrees awarded declined between 1991 and 1994, followed by a sharp increase in 1995.

**Figure 3-1**




Data source: Integrated Postsecondary Education Data System database, NCES. 1995

## Minorities

Professional organizations, including the American Association of Colleges of Teacher Education (AACTE) and the National Council for Accreditation of Teacher Education (NCATE), have encouraged and more recently mandated their members to increase the diversity of their student and faculty cohorts. Similarly, the various states have placed greater importance on both the diversity and the multicultural aspects of the preparation program. The result has been a substantial increase in both minorities entering college (in general) and in the proportion of those of color who are entering teacher education programs (see Table 3-5).

**Table 3-5**

| Total Percent Change in Schools, Colleges, and Departments of Education Enrollment by Race/Ethnicity, Fall of 1989, 1991, and 1995 | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1989 | | 1991 | | 1995 | | 1989-1995 |
| | # | % | # | % | # | % | Change |
| White | 426,748 | 86.5% | 459,279 | 84.6% | 418,824 | 80.5% | -1.9% |
| African American | 33,426 | 6.8% | 37,422 | 6.9% | 46,667 | 9.0% | 39.6% |
| Hispanic | 13,533 | 2.7% | 19,500 | 3.6% | 24,429 | 4.7% | 80.5% |
| Asian/Pacific Islander | 4,469 | 0.9% | 5,471 | 1.0% | 8,787 | 1.7% | 96.6% |
| Native American/ Alaska Native | 2,282 | 0.5% | 2,940 | 0.5% | 3,593 | 0.7% | 57.4% |
| Other | 13,138 | 2.7% | 17,964 | 3.3% | 12,274 | 2.4% | -6.6% |
| **Total** | **493,596** | **100%** | **542,576** | **100%** | **520,555** | **100%** | **5.5%** |

Data Source: AACTE, *Teacher Education Minority Enrollment Survey*, 1989, and *Survey of Teacher Education Enrollment by Race/Ethnicity and Gender*, Fall 1995. Reported *in Teacher education pipeline IV: Schools, colleges and departments of education*, 1997 AACTE (in print)

But as promising as these increases are, recruitment rates do not reflect the potential pool of minority candidates. First, the college enrollment of minorities is lower than should be expected based on the proportion of minority students coming out of public schools and, second, of all the minority students who do enroll in college, a relatively small proportion graduate with an education degree. So it appears that we are losing minorities all along the K-12 through college continuum, and this is reflected in the relatively low proportion found in the teaching workforce (see Table 3-6).

**Table 3-6**

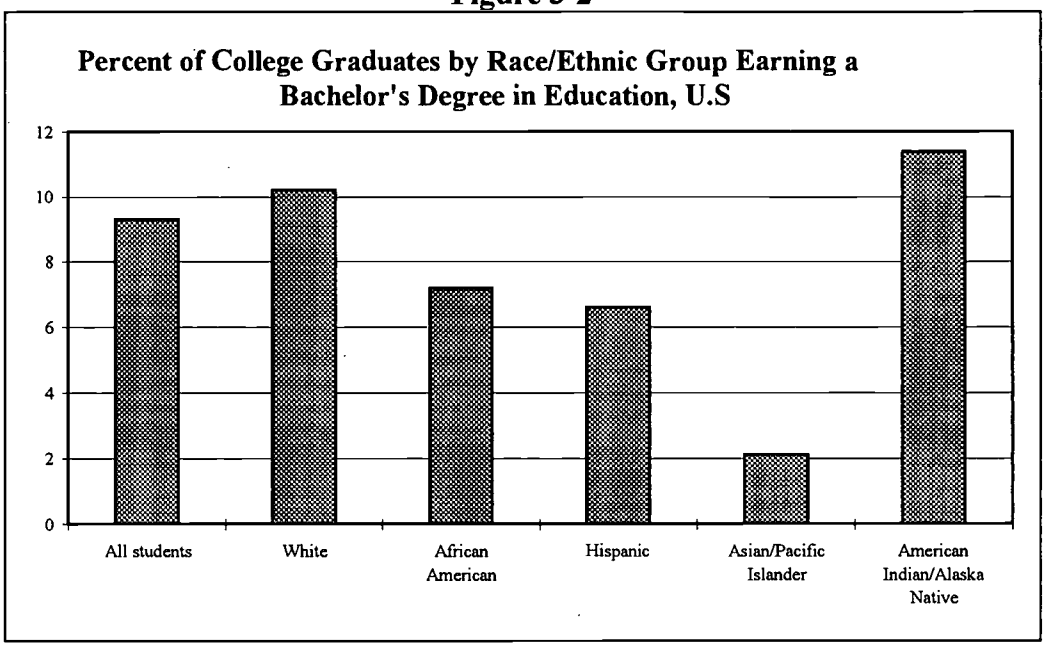
| Proportion of Minorities in Schools, Colleges, Education Programs, and the Teaching Force | | | | |
|---|---|---|---|---|
| | % Public School Students (1995) | % College Enrollment (1995) | % Education Graduates (1994) | % Teachers (1994) |
| Alaska | 34.3 | 19.3 | 13.8 | 10.7 |
| Idaho | 11.6 | 6.4 | 3.4 | 2.4 |
| Montana | 12.5 | 11.4 | 3.3 | 3.8 |
| Oregon | 14.7 | 13.4 | 4.5 | 4.3 |
| Washington | 21.7 | 17.5 | 8.4 | 5.1 |
| Region | 17.9 | 14.8 | 6.8 | 4.8 |
| U.S. | 35.2 | 25.3 | 11.6 | 13.5 |

Data Source: 1995 data from *The Chronicle of Higher Education Almanac,* August 29,1997, and 1995 data from *Digest of Education Statistics 1997, Table 210.*

The findings from a study entitled *Minorities in Higher Education* highlighted some of the challenges faced in recruiting and retaining minorities in teacher education programs.

First, except in the case of Native American/Alaska Native students, a smaller percentage of minority students choose education as a major (see Figure 3-2). Other fields—business management, engineering, and health sciences, in particular—compete successfully for their attention.

**Figure 3-2**




Data source: *Minorities in Higher Education, (No. 9),* National Center for Education Statistics, (1996), U.S. Department of Education

Second, minority high school graduates enroll in college at a disproportionately low rate. Those who do enroll are more likely to delay enrollment, enroll part-time, and/or choose a two-year college rather than a four-year—all factors that are shown to be associated with a lower-than-average completion rate.

Third, among bachelor's degree seekers, a smaller than average percentage of Black, Hispanic and Native America/Alaska Native college students actually complete a degree within five years. Completion rates for bachelor's degrees (all fields) are as follows: Asian/Pacific Islander, 74 percent; White, 64 percent; Black, 53 percent; Hispanic, 52 percent; and Native American/Alaska Native, 49 percent.

Consequently, in order to bring better racial/ethnic balance to the teaching force, not only are well-targeted recruitment efforts for education programs needed, but adequate support systems to help students successfully complete their programs must be in place. College graduation data suggests that schools of education have made significant progress in increasing minority representation at the master's level but little progress at the bachelor's level (see Table 3-7).

## Table 3-7

**Degrees in Education, 1990-91 and 1994-95**

| | Total Minority Bachelors Degrees & Certificates in Ed | | Percent change 1990-91 to 1994-95 | | Total Minority Masters Degrees and Certificates in Ed | | Percent change 1990-91 to 1994-95 | |
|---|---|---|---|---|---|---|---|---|
| | 1990-91 | 1994-95 | Minority Ed Degrees | All Ed Degrees | 1990-91 | 1994-95 | Minority Ed Degrees | All Ed Degrees |
| Alaska | 29 | 60 | 107% | 41% | 9 | 24 | 167% | 58% |
| Idaho | 25 | 22 | -12% | 30% | 13 | 20 | 54% | 20% |
| Montana | 38 | 21 | -45% | -6% | 7 | 7 | 0% | -26% |
| Oregon | 65 | 38 | -42% | -46% | 50 | 49 | -2% | 5% |
| Washington | 92 | 111 | 21% | -4% | 75 | 288 | 284% | 126% |
| Region | 249 | 252 | 1% | -9% | 154 | 388 | 152% | 55% |
| U.S. | 9,684 | 12,148 | 25% | -4% | 9,570 | 13,741 | 44% | 14% |

Data Source: *Teacher education pipeline IV.* 1997. American Association of Colleges for Teacher Education

For instance, note the dramatic increase at both the bachelor's and especially the master's level in Alaska compared to Oregon's decreased percentages at both levels. Idaho made some progress at the master's level, but experienced a decrease at the bachelor's level, even though total bachelor's degrees increased 30 percent. Montana's bachelor's level minority graduates decreased by almost half, while there was no change at the master's level. At both levels, education degrees awarded to minorities make up a disproportionately small percentage of total degrees awarded.

### Gender

Gender is another issue that ought to be a consideration in recruiting students into education programs. The lack of male elementary and junior high school teachers at both the bachelor's and master's degree levels (see Table 3-8) and the underrepresentation of female teachers in specific subject areas, such as science and math, are cases in point!

## Table 3-8

**PreK-12 Education Degrees Conferred in the U.S., 1993-94**

| Area of Specialization | Bachelor's | Males | Females | Master's | Males | Females |
|---|---|---|---|---|---|---|
| Bilingual/Bicultural | 54 | 6 | 48 | 264 | 46 | 218 |
| C&I | 7 | 2 | 5 | 8,246 | 1,552 | 6,694 |
| Special Education | 9,099 | 729 | 8,370 | 10,497 | 1,423 | 9,074 |
| Elementary Education | 48,733 | 4,642 | 44,091 | 12,958 | 1,444 | 11,514 |
| Junior High/Middle | 1,378 | 298 | 1,080 | 653 | 98 | 555 |
| Secondary | 3,746 | 1,537 | 2,209 | 3,986 | 1,467 | 2,519 |
| Preschool | 6,474 | 164 | 6,310 | 1,996 | 41 | 1,955 |
| Teacher Ed/General | 597 | 38 | 559 | 2,404 | 534 | 1,870 |
| Vocational Education | 34,428 | 16,229 | 18,199 | 16,106 | 4,935 | 11,171 |
| **Total** | 104,516 | 23,645 | 80,871 | 57,110 | 11,540 | 45,570 |

Data Source: Table 244, *Digest of Education Statistics,* 1996 (NCES).

## Where Are Teachers Being Prepared?

The Northwest has a total of 57 colleges and universities that have accredited teacher preparation programs. Alaska has 5; Idaho, 6; Montana, 8; Oregon, 16; and Washington, 22. Table 3-9 lists these institutions, their accreditation status, and the number of teaching certificates they awarded in 1995.

**Table 3-9**

**Northwest Teacher Preparation Institutions**
**Education Degrees Awarded in the NW**

| Institutions 1995 | Accredit. Status 1998 | Bachelor's/ Certificates | Master's/ Certificates | Doctorates | All Degrees |
|---|---|---|---|---|---|
| **ALASKA** | | | | | |
| Alaska Pacific University | R,S | 4 | 31 | - | 35 |
| Sheldon Jackson College | R,S | 21 | - | - | 21 |
| University of Alaska-Anchorage | R,S | 195 | 76 | - | 271 |
| University of Alaska-Fairbanks | N,R,S | 54 | 32 | - | 86 |
| University of Alaska-Southeast | R,S | 19 | 21 | - | 40 |
| **IDAHO** | | | | | |
| Albertson College of Idaho | R,S | 17 | 40 | - | 57 |
| Boise State University | N,R,S | 229 | 82 | - | 311 |
| Idaho State University | N,R,S | 246 | 116 | 1 | 364 |
| Lewis-Clark State College | N,R,S | 58 | - | - | 58 |
| Northwest Nazarene College | N,R,S | 62 | 43 | - | 105 |
| University of Idaho | N,R,S | 214 | 165 | 19 | 398 |
| **MONTANA** | | | | | |
| Carroll College | R,S | 30 | - | - | 30 |
| Montana State University-Billings | N,R,S | 124 | 59 | - | 183 |
| Montana State University-Bozeman | N,R,S | 146 | 46 | 13 | 205 |
| Montana State University-Northern | R,S | 66 | 72 | - | 138 |
| Rocky Mountain College | R,S | 13 | - | - | 13 |
| University of Montana-Missoula | N,R,S | 177 | 46 | 7 | 230 |
| University of Great Falls | R,S | 25 | - | - | 25 |
| Western Montana College-UM | N,R,S | 121 | - | - | 121 |
| **OREGON** | | | | | |
| Concordia University | R,S | 86 | - | - | 102 |
| Eastern Oregon State. College | R,S | 22 | 27 | - | 49 |
| George Fox University | R,S | 53 | 35 | - | 88 |
| Lewis & Clark College | R,S | - | 144 | - | 144 |
| Linfield College | R,S | 45 | 13 | - | 58 |
| Montessori Institute NW | | - | - | - | 33 |
| Oregon State University | N,R,S | 81 | 188 | 31 | 469 |
| Northwest Christian College | n/a | n/a | n/a | n/a | n/a |
| Pacific University | R,S | 17 | 95 | - | 112 |
| Portland State University | N,R,S | 24 | 243 | 10 | 385 |
| Southern Oregon State College | R,S | 29 | 52 | - | 142 |
| University of Oregon | R,S | 11 | 173 | 42 | 226 |

**continued on page 37**

**Table 3-9 (continued)**

| Institutions 1995 | Accredit. Status 1998 | Bachelor's/ Certificates | Master's/ Certificates | Doctorates | All Degrees |
|---|---|---|---|---|---|
| University of Portland | R,S | 90 | 250 | - | 340 |
| Western Baptist College | N,R | 31 | - | - | 31 |
| Western Oregon State College | N,R,S | 155 | 140 | - | 316 |
| Willamette University | R,S | 4 | 62 | - | 66 |
| **WASHINGTON** | | | | | |
| Antioch University-Seattle | R,S | - | 54 | - | 98 |
| Central Washington University | N,R,S | 389 | 65 | - | 454 |
| City University | R,S | - | 1,115 | - | 1,122 |
| Eastern Washington University | N,R,S | 364 | 122 | - | 486 |
| Evergreen State College | R,S | - | 42 | - | 42 |
| Gonzaga University | N,R,S | 42 | 378 | 16 | 436 |
| Heritage College | R,S | 36 | 426 | - | 465 |
| Northwest College | R,S | 24 | - | - | 24 |
| Pacific Lutheran University | N,R,S | 129 | 49 | - | 178 |
| Saint Martins College | R,S | 55 | 10 | - | 65 |
| Seattle Pacific University | N,R,S | 39 | 89 | - | 128 |
| Seattle University | N,R,S | - | 215 | 20 | 235 |
| University of Puget Sound | N,R,S | 28 | 96 | - | 124 |
| University of Washington | R,S | 12 | 104 | 29 | 145 |
| University of Washington-Tacoma | R,S | - | 30 | - | 30 |
| Walla Walla College | R,S | 23 | 10 | - | 33 |
| Washington State University | N,R,S | 177 | 133 | 16 | 667 |
| Western Washington University | N,R,S | 221 | 266 | - | 487 |
| Whitman College | R,S | n/a | n/a | n/a | n/a |
| Whitworth College | N,R,S | 45 | 107 | - | 152 |
| **Total** | | 4,053 | 5,562 | 204 | 10,623 |

* Accreditation status source: *The NASDTEC Manual*, 1998-99 (Key: N=NCATE, R=Regional, S=State)

Recent efforts have been initiated emphasizing tougher licensing and certification standards for beginning teachers. NCATE developed new standards for schools of education in 1995. These new standards are closely aligned with core academic and skill standards for student learning. Accreditation status may be either State (S), Regional (R), or National (N)—NCATE. It should be noted that NCATE is a voluntary membership. Those institutions that do not have such accreditation should not necessarily be presumed to be of lesser quality. They have simply not chosen to subject their programs to the scrutiny of a national review. Using data from Table 3-9 above, Table 3-10 is a picture of accreditation in the Northwest.

**Table 3-10**

| Accreditation Status of Schools, Colleges, Departments of Education in the Northwest | | | |
|---|---|---|---|
| | State | Region | NCATE |
| Alaska | 5 | 5 | 0 |
| Idaho | 6 | 6 | 5 |
| Montana | 8 | 8 | 4 |
| Oregon | 16 | 16 | 3 |
| Washington | 22 | 22 | 11 |
| **Total** | **57** | **57** | **22** |

### Incentives for Students to Enter Teacher Preparation Programs

At the state level, loan-forgiveness programs are the most prevalent form of assistance to pre-collegiate students interested in careers in teaching. Thirty-one states make loans that college students do not need to repay if they teach for a specified time after graduation in that state. Forgivable loans have been used primarily to recruit teachers in shortage areas, such as science, mathematics, and bilingual education. In the Northwest, only Alaska, Oregon, and Washington provide state support for teacher education students, and only Oregon and Washington provide precollegiate program support by way of legislation (see Table 3-11).

**Table 3-11**

| State Support for Education Students and Precollegiate Teacher Recruitment | | | | | | |
|---|---|---|---|---|---|---|
| **State** | **State Aid for Ed. Students** | **Total Funding, (If Known)** | **Grants to Education Students** | **Loan-Forgiveness Programs** | **Precollegiate Programs** | **Precollegiate Legislation** |
| Alaska | Yes | $90,000 | Yes | Yes | No | No |
| Idaho | n/a | n/a | No | No | No | No |
| Montana | n/a | n/a | No | No | No | No |
| Oregon | Yes | Not Known | Yes | Yes | Yes | Yes |
| Washington | Yes | n/a | Yes | Yes | Yes | Yes |

Data Source: *Teachings Next Generation* as of July, 1992

The Alaska Native Teacher Scholarship Program permits districts to nominate Native Americans to attend and complete a teacher preparation program at a university. These individuals receive forgivable loans of up to $7,500.

In 1991, Oregon sponsored a Teacher Corps Program, although for financial reasons it is currently in jeopardy. The program offers special forgivable loans of $3,000 per year to teacher education students in the upper 20 percent of their respective classes. Minority status is a priority in the selection of applicants, as is willingness to teach in a subject shortage area. Senate Bill 122, passed in June 1991, mandates that the State Board of Higher Education require each public teacher education program to prepare a plan for the recruitment, admission, retention, and graduation of minority teachers.

Washington House Bill 1885, passed in 1991, placed a priority on the recruitment of teachers through an annual "Education Week" program at Central Washington University and other campuses around the state. The legislature has also created a "Teachers Recruiting Future Teachers" program that has sought guidance from officials at the South Carolina Center for Teacher Recruitment, leading towards the possible implementation of cadet-style programs in the state. Sixteen states, including Oregon and Washington, report state agency support for pre-collegiate teacher recruitment efforts.

Currently, teacher education programs attract a significant number of students. The percentage distribution of probable fields of study among first-time college freshmen, by gender, in the Fall of 1996 showed that 6.3 percent of men and 14.2 percent of women chose education as a probable field of study (Sax, et al., 1996).

## Certification

In addition to a teacher's formal education, certification/licensing is also an important component of a teacher's formation. Individuals may graduate with a degree in education or go through a teacher preparation program but may not seek certification. Certification includes formal education, clinical experiences, and formal testing. In short, an individual's competence and/or qualifications are "certified" by an institution of higher education, which in turn allows him or her to be licensed for and by the state to teach. Most professional preparation is higher education based; teacher education is no exception. Teacher licensing is generally a function of a state board of education and is usually monitored and administered through an administrative office of public instruction. Most often, the terms "certification" and "licensing" are used synonymously.

Many states are exploring the establishment of new regulatory policies and procedures for licensing or relicensing. Changes being considered include:

- Use of alternate providers for continuing education units (ceus)
- Developing or adopting performance-based assessments for licensure
- Evaluation of teacher preparation programs based on the performance of graduates on licensure exams
- Development of teacher professional standards boards
- Promoting salary differentiation for teachers corresponding to new licensure formats
- Establishing linkages between the licensure process and NCATE

All such efforts are directed at raising standards to ensure teachers are well-prepared for the new roles they will be assuming.

Certification status indicates that teachers meet minimum teaching standards and qualifications set by their state. These standards are important components of the educational system and work as guides to essential components of teacher preparation programs. Each state not only licenses its teachers, but also approves and accredits its teacher education programs. Thus, each state sets standards for teachers as well as for teacher preparation programs, and those standards vary by state.

In spite of the importance of depicting currently certified teachers, it is extremely difficult to portray certification numbers in the Northwest. Each state tracks certification data in idiosyncratic ways that do not necessarily lend themselves to comparisons across states. The capability and priority within each state to collect and report certification data varies greatly.

**Levels of Certification**

State certification is designed to address the government's vested interest in protecting its citizens and its children. Minimum qualifications are identified for the receipt of a license to practice within each state. Increasingly, states are recognizing a responsibility beyond monitoring minimal requirements. For example, some states require ongoing professional development in order to maintain a teaching license.

Levels of certification, sometimes referred to as "sequential certification" or "incremental licensing", not only recognize minimal entry-level qualifications, but seek to monitor the progression of professional development across a teacher's career. Thus, some states license teachers in relation to their career status. Levels move from initial certification to advanced, depending on both longevity and development of proven expertise. Such requirements have the potential of encouraging a career ladder in the teaching profession.

**Elementary**

Most Northwest states track the number of elementary certificates awarded annually. Idaho, Montana, and Washington also tabulate endorsements to teach specific subject areas at the secondary level.

Information about newly certified teachers is of particular interest. Unfortunately, few states separate new certification from others.

Most states track initial certificates for elementary teachers (generally a licensure for teaching kindergarten through eighth grade). These initial certificates are awarded to individuals who have not previously been licensed in the state. The number of new certificates is equivalent to the number of new graduates applying for teacher certification and the number of teachers that are new to the state and applying for a license.

## Secondary

Certification at the secondary level generally covers a variety of grade configurations and is most often specific to a teaching major and/or minor. Secondary teachers are distinguished from elementary-level teachers through licensing that allows them to teach grades ranging from as low as fifth (in Montana) through 12th grade. Often middle school teachers have secondary licenses. Typically, junior high school (traditionally grades seven-eight) and high school (traditionally grades nine-12) are covered by a secondary license.

## Alternative Certification

Programs continue to be developed that challenge the traditional college-based teacher preparation models. The number of teachers completing alternative certification programs remains small. A review of the literature reveals that there is inconsistent data about the quality of the preparation of alternative programs. Often such programs arise in response to specific teacher shortages or scarcity in specified fields. In large urban districts that maintain ongoing shortages of qualified professionals, alternative certification promises an increased supply of new teachers.

Public school teacher aides, both full and part time, are frequently participants in alternative certification programs. The assumption is that experience in the classroom will provide a level of expertise that can then be augmented with training for certification. Table 3-12 shows the number of full- and part-time teacher aides working in the Northwest in 1990.

**Table 3-12**

**Number of Public School Teacher Aides, Full and Part Time by State**

| State | Number of Full-Time Classroom Teacher Aides | Number of Part-Time Classroom Teacher Aides |
|---|---|---|
| Alaska | 796 | 588 |
| Idaho | 1,606 | 523 |
| Montana | 1,015 | 584 |
| Oregon | 2,814 | 2,580 |
| Washington | 5,551 | 3,837 |
| Region | 11,782 | 8,112 |
| U.S. | 306,374 | 108,192 |

Data Source: NCES, NDRC, 1994.

In the Northwest, only Washington and Alaska have formal para-educator programs, six in Washington and two in Alaska. These are described in *Breaking the Class Ceiling: Para-educator Pathways to Teaching,* 1990-91, Recruiting New Teachers, (Appendix G).

Postbaccalaureate programs also exist that seek to prepare individuals who have completed a baccalaureate degree in a field other than education. Often chosen mid-career, such an alternative route takes advantage of existing college-based teacher education programs. Such programs may certify teachers at either the baccalaureate or graduate level. According to the *Directory of Postbaccalaureate Programs,* Washington has eight alternative programs; Oregon, two; Montana, five; Idaho, three; and Alaska, two.

**Alternative Certification Programs in the Northwest**

**Alaska:**

- Alternative Teaching Program: Started in 1992, this postbaccalaureate program has been designed to attract talented individuals who already have at least a bachelor's degree in a field other than education into elementary and secondary school teaching. The program is not restricted to shortages, secondary grade levels, or subject areas. It involves teaching with a trained mentor, accompanied by formal instruction that deals with the theory and practice of teaching. The program runs during the regular school year and sometimes in the summer.
- Content Specialist Card Program: Initiated in 1992, this is a route that enables a person who has "special" qualifications—such as a well-known author or Nobel prize winner—to teach certain subjects.
- University of Alaska: Southeast M.A.T. started in 1994. This route entails a review of a candidate's academic and professional background as well as an analysis of his/or her transcripts. It involves individually designed inservice and course requirements necessary to reach competencies required for certification. The state and/or local school district has the major responsibility for program design.

**Idaho:**

- Secondary Field-Centered Teacher Training Program: Developed in1990, this program is designed for the explicit purpose of attracting talented individuals who already have at least a bachelor's degree in a field other than education into secondary school teaching. This program is restricted to shortages, secondary level, and subject areas.

**Montana:** (Since 1996, Montana has not implemented alternative routes to approved college-based teacher education programs for licensing teachers.)

- Class 5 (Provisional) Teaching Certificate: Started in 1975, this route entails a review of a candidate's academic and professional background as well as an analysis of his/or her transcripts. It involves specially designed inservice and course requirements necessary to reach competencies required for certification. Institutions of higher education have the major responsibility for program design.
- Class 7 Teacher Certification: This license, initiated in 1996, allows the teaching of Native American languages in the public schools by fluent native speakers who are judged to be competent to provide instruction. The license limits the holder to instruction in a specified native language.

**Oregon:**

- Interim Teacher Certificate: This route entails a review of a candidate's academic and professional background as well as an analysis of his/or her transcripts. It involves individually designed inservice and course requirements necessary to reach competencies required for certification. The state and/or local school district has the major responsibility for program design. This certification was made available in 1986.

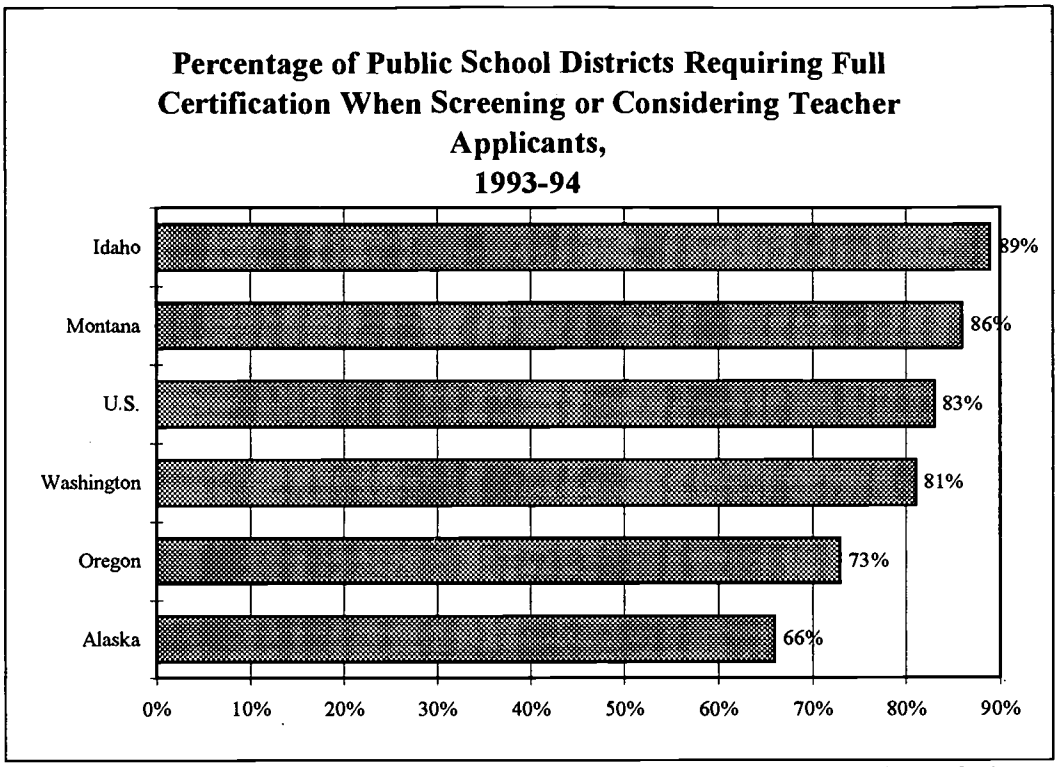
**Washington:**

- Conditional Certificate and Instructional Specialist Program: Started in 1990, these are routes that enable a person who has "special" qualifications—such as a well-known author or Nobel prize winner—to teach certain subjects.
- Internship Program: This postbaccalaureate program has been designed for the explicit purpose of attracting into elementary and secondary school teaching talented individuals who already have at least a bachelor's degree in a field other than education. The program is not restricted to shortages, secondary grade levels, or subject areas. The program involves teaching with a trained mentor, accompanied by formal instruction that deals with the theory and practice of teaching. The program, started in 1991, runs during the regular school year and sometimes in the summer.
- Teach for America: This program is designed for the explicit purpose of attracting talented individuals who already have at least a bachelor's degree in a field other than education into secondary school teaching. This program, adopted in 1994, is restricted to shortages, secondary level, and subject areas.

**Initial Certification**

Because states require that public school districts employ only certified (licensed) teachers, most districts make licensing a requirement for consideration in hiring. Figure 3-3 shows the percentage of public school districts requiring full, standard, state certification when screening or considering teacher applicants, by state, in 1993-94, according to the National Center for Education Statistics.

**Figure 3-3**




Data Source: *Schools and Staffing Survey,* 1993-94, U.S. Department of Education, NCES.

The same source reports that the percentage of public school districts requiring a college major or minor in the field to be taught when screening or considering teacher applicants is somewhat lower: Montana, 78 percent; U.S., 67 percent; Idaho, 63 percent; Washington, 51 percent; Oregon, 39 percent; and Alaska, 22 percent.

## Advanced Certification

In addressing the notion of advanced certification, it is necessary to distinguish between levels of licensure (addressed at the beginning of this section) and professional certification. The former indicates governmentally required conformity to legislated standards of competence necessary to practice. The latter is recognition of excellence and a high level of expertise and skill by the profession or by a professional agency or association. The National Board for Professional Teacher Standards (NBPTS) was instituted in 1987 to establish rigorous standards and assessments for certifying accomplished teaching. The 63-member board is comprised of a majority of outstanding classroom teachers. The remainder of the board includes school board members, governors, legislators, administrators, and teacher educators. The NBPTS has established a rigorous testing and reflective teaching assessment process for identifying highly skilled "master teachers." The National Commission on Teaching and America's Future recommends that the NBPTS framework be used in assessing the professional development of teachers. Various states have recognized the NBPTS as a desirable accomplishment for their teachers.

**The status of NBPTS in the Northwest:**

Alaska: The Alaska Association of School Administrators and the Association of Alaska School Boards have unanimously recommended to the Alaska State Board of Education that NBPTS be adopted as Alaska's state standards for advanced licensure.

Idaho: The Idaho Education Association adopted a resolution that supports "voluntary professional certification."

Montana: The state has signed the National Association of State Directors of Teacher Education and Certification Interstate Contract. It will award its highest level certification to teachers who have obtained National Board Certification in corresponding certificate areas, as long as applicants also hold a comparable and valid certificate issued by a member state and comply with any requirements of the receiving state regarding degrees held, citizenship, and moral, ethical, physical, and mental fitness.

Oregon: The Oregon Teacher Standards and Practices Commission (TSPC) has proposed a redesign of teacher preparation and licensure. Included in the proposal is language for National Board Certification. It states: "Certification by the NBPTS will be encouraged. TSPC's proposed licensure system with its emphasis on self-assessment and continuing professional development should assist teachers to prepare for NBPTS evaluations. Teachers who achieve NBPTS certification will have met the professional development requirements for the next renewal of their Oregon Continuing Licenses."

Washington: No official position on NBPTS has been indicated by the state.

## SUMMARY

- The National Commission on Teaching and America's Future states that half of the nation's aging teacher workforce will be replaced in the next 10 years.
- Enrollment in four-year colleges is projected to increase by 15 percent.
- In the United States between 1990 and 1995, the number of bachelor's degrees increased by 25 percent, while the number of education degrees awarded decreased by 9.1 percent.
- There are few financial incentives in the Northwest for students to enter teacher preparation programs.
- The number of bachelor's degrees in education awarded in the Northwest region decreased by nearly 10 percent between 1990 and 1995 while, for the same period, master's degrees in education increased by 55 percent.
- The percent of master's degrees in education awarded to minorities in the Northwest increased almost 150 percent between 1990 and 1995.
- Schools, colleges, and departments of education (SCDE) need to do a much better job in actively recruiting minority students into teacher education.
- National data indicate that larger percentages of low-income students have less-qualified teachers on average than the rest of the student population.
- Less than half of the teacher education programs in the Northwest are accredited by NCATE.
- A number of recent efforts have been initiated emphasizing tougher licensing and certification standards for beginning teachers.
- Increasing emphasis in teacher preparation is being placed on content knowledge as a primary focus.
- New standards are being closely aligned with core academic and skill standards for student learning.
- National Board for Professional Teaching Standards (NBPTS) provides advanced certification for master teachers. Various states have recognized and encouraged NBPTS as a desirable accomplishment for their teachers

# PROFESSIONAL DEVELOPMENT

**The following key questions suggest the focus of this section:**

- **What do we know about induction and mentoring programs for new teachers and their effectiveness?**
- **How many teachers are participating in professional development programs and what do we know about the teachers who participate (e.g., age, elementary/secondary, urban/rural, ethnic status)?**
- **What is the content of the professional development programs in which teachers participate?**
- **How are local schools and school districts supporting teachers to participate in professional development programs?**
- **What is the intensity and depth of professional development by teachers?**
- **What are teacher perceptions about the impact of their participation in professional development programs?**
- **Where does the funding come from for professional development, how much is being spent, and on what?**
- **What drives the direction of professional development for teachers?**
- **What are the future needs and issues in professional development?**

## Overview of Professional Development

The goal of professional development for teachers is changing from the notion of being simply "any course work, experience, training or renewal activity required by a state to keep a certificate in force" (National Association of State Directors of Teacher Education and Certification [NASDTEC], 1998) to that of addressing student learning and the factors that create high levels of student achievement. With this shift, teachers are expected to redefine their traditional role as a teacher; to update their subject matter knowledge; to acquire new skills, particularly in technology; and to expand their pedagogical approaches. Never before has there been a greater recognition of the importance for the professional development of teachers. Every proposal to reform, restructure, or transform schools recognizes professional development for teachers as the primary vehicle to bring about desired changes.

Recognition of the importance of professional development is reflected in the National Education Goals adopted by Congress in 1995. Goal four states that "all teachers will have access to...continuing professional development activities...to acquire the knowledge and skills needed to instruct and prepare all American students for the next century." Targeted are those skills needed to teach diverse students; to teach challenging subject matter; and to use new methods, forms of assessment, and technologies. Among its seven national priorities for public education, the U.S. Department of Education included career-long professional development for teachers and administers, with a number of programs designed to enhance teacher performance in the classroom. Professional development is the bridge between where teachers are now and where they need to be to meet the challenges of guiding all students toward achieving higher standards of learning.

Schools must not only hire well-qualified teachers, but they must provide the necessary support for teachers to continue to meet the new expectations. To have the most impact, it has been suggested that the professional development of teachers must be tied to the reform efforts and priorities of the local school.

The old models of professional development no longer work effectively. Participation in one-shot workshops and completion of coursework chosen to suit individual teachers' needs leads to fragmented and disconnected results. The current thinking is that the professional development of teachers should be viewed as a continuum of recruitment and selection, preparation, initial licensing, and induction through ongoing development and support, and advanced certification of teachers (The National Foundation for the Improvement of Education Report: Teachers Take Charge of Their Learning, 1996; The Homes Group Report, *Tomorrow's Schools of Education*, 1995).

While increased attention is being focused on the professional development of teachers, little data and documentation are available to determine effect and impact.

## Current Efforts

### Induction and Mentoring Programs for New Hires

The attrition of the teacher workforce through retirement, burnout, and rustout appears to be responsible in part for creating a large cadre of less-experienced teachers, a cadre that will need different support efforts than in the past in order to meet the changing expectations of schools. Current follow-up data concerning beginning or new-hire teachers focuses on numbers employed and their location; little is known about district- or building-level efforts in structured induction and mentoring programs. And because data-collection processes vary between and within states, such information, when available, is inconsistent. NASDTEC reports some information on the extent of support beginning teachers are receiving, either through formal state programs or other policies. Nationally, only North Carolina has a state mandate concerning the assignments of beginning teachers, although other states encourage such activities. In the Northwest, only Washington has a Beginning Teacher Support System (BTSS) in place. Components include criteria and processes for the selection of both beginning teachers and the mentor teacher (and/or

members of the support team), assistance to the beginning teachers, and state funding to districts (Table K-2, NASDTEC, 1998).

### Participation in Programs

Teacher participation in professional development activities is assumed because of state licensing requirements. All of the states of the Northwest region require continuing education hours to maintain teaching certification; only Washington requires hours to maintain subject endorsements. Although the specific number of hours may vary, all states allow a five-year time frame for completion (NASDTEC, 1998-99; NWREL interviews with certification officers). While participation is expected, teachers can choose among various types of activities to meet the requirements. Ultimately, most teachers participate in such activities.

Based on national data, in the1993-94 NCES *Schools and Staffing Survey*, most elementary and secondary teachers reported participation in one or more professional development activities in the previous year (see Table 4-1).

**Table 4-1**

**Percentage of U.S. teachers who had participated in various types of professional development since the end of the previous school year, 1993-94**

| | Workshop/ inservice program | College/ University extension or adult education courses | Professional growth activities sponsored by professional associations | Committee to integrate academic and vocational skills | Committee on selecting text or materials | Other curriculum committee | None of the above |
|---|---|---|---|---|---|---|---|
| **Public School Participation** | 93.4 | 38.4 | 51.4 | 16.0 | 29.0 | 40.3 | 2.8 |
| District Size | | | | | | | |
| >1000 | 91.3 | 42.2 | 56.2 | 18.0 | 37.6 | 43.2 | 2.2 |
| 1000-4999 | 91.3 | 38.7 | 51.4 | 15.6 | 33.1 | 43.4 | 2.5 |
| 5000-9999 | 93.4 | 38.4 | 52.0 | 16.8 | 27.5 | 40.2 | 2.7 |
| 10000+ | 93.3 | 37.6 | 49.1 | 15.4 | 23.9 | 36.6 | 3.4 |
| **Private School Participation** | 84.7 | 32.3 | 43 | 8.3 | 33.7 | 27.5 | 7.3 |
| **All teachers' Participation** | 92.3 | 37.7 | 50.3 | 15.1 | 29.6 | 38.7 | 3.4 |

Of the various types of professional development, 92 percent of teachers participated in school-or district-sponsored workshops or inservice programs. Most teachers participated in these programs and other curriculum-related activities because school districts have been responsible for professional development except for that related to higher education and the professional associations. Fifty percent participated in activities sponsored by professional associations. The size of the districts was related to the types of activities teachers were engaged in: (1) As districts became larger, teachers were less likely to have taken university or adult education courses, attended activities sponsored by professional associations, or participated in curriculum committees; (2) While data in teacher professional development demonstrates involvement on the part of teachers to engage in continuous learning, there is no data to determine the impact of participation on improving student learning.

**Content of Programs**

Limited data is available about the content of professional development programs. Most schools and school districts continue to inservice teachers on topics independent of experience, needs, or circumstances. Lack of school or district professional development plans contribute to content not necessarily connected to overall goals or outcomes. Alaska, Idaho, and Washington require submission of district professional development plans to the state; Montana and Oregon do not. (NWREL interviews with certification officers) Information was not given on follow-up or use of these plans at the state level.

Some data currently available uses topics that tend to mirror those areas of need for teachers identified in most national reports. For example, those used in a U.S. Department of Education report (*SASS*) are: methods of teaching the specific subject field, uses of educational technology for instruction; indepth study in the subject field, student assessment, and cooperative learning in the classroom (see Table 4-2). These data indicate that at both the elementary and secondary level, nearly one-half (49 percent) of all teachers in the Northwest region had participated in at least one professional development program since the end of the last school year: uses of educational technology for instruction (56.4 percent), student assessment (50 percent), and cooperative learning in the classroom (44 percent). Almost two-thirds (62 percent) had participated in professional development programs on methods of teaching in their fields.

Table 4-2

**Percent of Public School Teachers According to the Number of Hours Spent in Inservice or Professional Development Programs, by Topic**

| | Use of technology | | | | Methods of teaching | | | | Indepth study | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 hours | 8 hours | 9-32 hours | >32 hours | 0 hours | 8 hours | 9-32 hours | >32 hours | 0 hours | 8 hours | 9-32 hours | >32 hours |
| Alaska | 36.7 | 42.4 | 16.7 | 4.2 | 36.0 | 31.1 | 22.8 | 10.1 | 63.6 | 16.4 | 11.2 | 8.8 |
| Idaho | 59.6 | 25.3 | 12.2 | 3.0 | 39.4 | 25.7 | 26.4 | 8.5 | 71.6 | 10.4 | 12.0 | 6.1 |
| Montana | 43.6 | 38.1 | 14.1 | 4.3 | 39.6 | 28.9 | 23.8 | 7.7 | 71.7 | 10.6 | 11.0 | 6.7 |
| Oregon | 53.6 | 31.6 | 11.4 | 3.3 | 37.1 | 34.7 | 22.4 | 5.7 | 70.4 | 12.9 | 11.8 | 4.9 |
| Washington | 35.7 | 36.2 | 23.1 | 4.9 | 38.2 | 27.3 | 25.7 | 8.8 | 64.2 | 12.0 | 13.9 | 9.9 |
| Region | 43.6 | 33.9 | 17.2 | 4.1 | 37.6 | 29.1 | 24.2 | 7.8 | 66.6 | 12.1 | 12.5 | 7.7 |
| U.S. | 50.6 | 34.6 | 11.8 | 3.0 | 36.0 | 36.6 | 19.9 | 7.5 | 70.0 | 14.7 | 9.3 | 6.0 |

| | Student assessment | | | | Cooperative learning | | | |
|---|---|---|---|---|---|---|---|---|
| | 0 hours | 8 hours | 9-32 hours | >32 hours | 0 hours | 8 hours | 9-32 hours | >32 hours |
| Alaska | 50.5 | 38.0 | 8.7 | 2.9 | 57.7 | 31.6 | 8.1 | 2.6 |
| Idaho | 60.2 | 25.2 | 11.4 | 3.2 | 57.0 | 25.2 | 14.5 | 3.2 |
| Montana | 56.3 | 31.3 | 10.0 | 2.3 | 54.5 | 32.0 | 11.4 | 2.2 |
| Oregon | 45.3 | 42.1 | 8.1 | 4.4 | 61.7 | 26.3 | 10.3 | 1.8 |
| Washington | 50.7 | 33.2 | 13.1 | 3.0 | 54.3 | 30.2 | 12.3 | 3.1 |
| Region | 50.4 | 34.3 | 10.8 | 3.3 | 56.2 | 28.5 | 11.5 | 2.6 |
| U.S. | 48.6 | 39.5 | 9.1 | 2.8 | 49.1 | 37.8 | 10.1 | 3.0 |

Data source: *Toward Better Teaching: Professional Development in 1993-94*, Tables 14a and 14b, NCES

Several national organizations are developing national standards by subject area (e.g., National Council for Teacher of Mathematics Standards) and by level, (National Association of Elementary School Principal's Standards for Elementary School Staff Development, and the National Staff Development Council, 1995. These efforts have the potential to drive professional development programs.

## School and District Support for Teacher Development

Most schools and districts provide some incentives for teachers to develop professionally. Most full-time teachers are supported through released time from teaching or scheduled time for professional development (see Table 4-3). Other forms of support may include credits and reimbursement of tuition, fees, or expenses. In the Northwest region, educational activities resulting in an advanced degree are linked to advancement on the salary schedule, thus becoming a kind of incentive for participation. The issue of released time is generally a local issue; Alaska has up to 10 days for professional opportunities, and Montana specifies seven release days. (NWREL interviews with certification officers) Provision for substitute pay varies in the region.

Alaska, Idaho, and Washington provide it in some circumstances; Montana and Oregon do not. Decisions regarding professional development activities are generally made at the local level, although workshops on various topics can be provided at the state level.

**Table 4-3**
**Percent of Teachers Receiving Support for Various Types of Inservice**

| | Release time from teaching | Time built into schedule | Travel expense | Tuition or fees | Professional growth credit | None of these |
|---|---|---|---|---|---|---|
| Alaska | 52.1 | 41.1 | 21.6 | 15.5 | 25.3 | 24.5 |
| Idaho | 50.3 | 39.6 | 29.4 | 32.3 | 41.3 | 18.5 |
| Montana | 51.4 | 43.3 | 33.5 | 20.9 | 37.5 | 20.3 |
| Oregon | 52.6 | 36.5 | 29.0 | 45.9 | 26.4 | 21.0 |
| Washington | 54.6 | 36.9 | 29.4 | 30.5 | 34.8 | 17.5 |
| Region | 52.5 | 37.6 | 28.8 | 32.4 | 32.6 | 19.1 |
| U.S. | 48.2 | 40.0 | 23.6 | 22.8 | 32.4 | 22.3 |

Data Source: *Toward Better Teaching: Professional Development in 1993-94*, Table 17, NCES.

### The Intensity and Depth of Programs

Critics and educators alike recognize that the professional development training model of the one-shot workshop of half-day length is not effective in bringing about any sustained change in teacher behaviors (National Staff Development Council, 1995). Teachers with different and new skills and knowledge become the key in enhancing and increasing student learning. Administrators and teachers report that time is the critical element in continued training, both time spent in learning and time spent in practicing and evaluating results (The National Foundation for the Improvement of Education, 1996). Providing enough time will require innovative approaches such as flexible scheduling and extended-year teacher contracts without students. Many professional development programs can disrupt school schedules, require extra days off for students, and add to a long day as an after-school activity. In spite of the recognition of the ineffectiveness of half-day workshops, 1993-94 data indicate that no more than one-half of the teachers who participated in programs on particular topics reported that the program lasted more than a day (see Table 4-4). Time spent in professional development programs is still quite limited, with few programs lasting more than a day.

**Table 4-4**

**Of teachers who participated in professional development on each of several topics, percentage who reported that the program lasted more than one day, 1993-94, U.S.**

| | Uses of educational technology for instruction | Methods of teaching the subject field | Indepth study in the subject field | Student assessment | Cooperative learning in the classroom |
|---|---|---|---|---|---|
| **Public** | 29.9 | 42.8 | 50.9 | 23.2 | 25.6 |
| **Private** | 25.8 | 35.4 | 49.4 | 18.9 | 21.1 |
| **Total** | 29.6 | 42.0 | 50.8 | 22.8 | 25.2 |

Data Source: *America's Teachers: Profile of a Profession, 1993-94*, Table 3.16, NCES.

It appears that most inservice programs continue to be patterned after familiar one-shot workshop models over innovative alternatives that may take more time. No regional data is available on the type or duration of professional development opportunities.

For professional development to have a more lasting effect, time without students must be provided for teachers to learn, as well as time during the day when students are present so that teachers can experiment with new approaches, have time to interact with colleagues, and assess and revise practices.

If reform efforts are to be successful, new approaches to the professional development of teachers will be needed.

### Teacher Perception of the Impact of Programs on Student Learning

Teachers responding to the National Foundation for the Improvement of Education (NFIE) survey reported being motivated to continue studying and growing as professionals in order to: improve student achievement (73 percent), improve teaching skills (55 percent), and increase their own knowledge (34 percent) (National Foundation for the Improvement of Education, 1996). Other motivations were also reported, but these three were the most prevalent. These areas clearly address the expressed goals for schools: to be places of improved teaching and learning. While little data exists to determine the impact of professional development activities on student achievement, teachers have positive views about the impact of the professional development programs in which they participated (see Table 4-5). For example, 85 percent of participants thought that these programs provided them with new information. About 65 percent agreed that the programs made them change their teaching practices, and 62 percent reported that they were motivated to seek further information or training.

Table 4-5

**Of teachers who participated in professional development on each of several topics, percentage who agreed or strongly agreed with various statements about the impact of the program, 1993-94**

| | Provided new information | Changed views on teaching | Caused me to change my teaching practices | Caused me to seek further information/training |
|---|---|---|---|---|
| **Public** | 84.9 | 41.7 | 64.7 | 62.6 |
| **Private** | 85.7 | 40.8 | 62.7 | 60.6 |
| **Total** | 85.0 | 41.6 | 64.5 | 62.3 |

Data Source: *America's Teachers: Profile of a Profession, 1993-94*, Table 3.17 NCES.

NOTE: Teachers were given the option of responding that they strongly agreed, agreed, disagreed, or strongly disagreed.

## The Funding of Professional Development

Little is known about the amount of dollars teachers in the Northwest spend out of pocket on their own professional development. The state departments of education do not collect data on the amount local schools and districts spend on professional development out of local funds. It is recognized that local districts bear the brunt of the costs for the professional development of teachers, and that more is spent than most policymakers realize. There is speculation that the resources are typically spent in ineffective ways for unclear purposes and that local professional development programs have weak effects on practice because they lack focus, intensity, follow-up, and continuity. In many cases, neither individual nor organizational activities are closely linked to district goals for student performance.

At the local level, the following elements and their related costs (approximately three percent to five percent of local operating costs) are associated with professional development:

- Staff costs associated with planning and delivering inservice and with opening schools for two to five extra days per year for inservice
- Sending teachers to workshops
- Supervising and evaluating personnel
- Reimbursing tuition
- Paying salary increments for attaining graduate degrees, college credits, or CEUs (continuing education units)

At the state level, the following elements and their related costs (ranging from less than 1 percent to more than 3 percent of total state spending on public education) are associated with professional development:

- State categorical funds set aside for professional development
- Time provided by state employees for providing inservice programs or consulting to schools
- Administrative costs for teacher recertification programs
- Costs for state funded conferences or workshops
- State subsidies to colleges or universities for courses provided to teachers
- Tuition reimbursement and salary increments for credits for teachers employed directly by the state
- Additional state aid to local districts whose budgets have increased because of teacher salary changes for college credits or degrees earned

In the Northwest, state funding for professional development is allocated to schools in different ways. In Alaska, Idaho, and Washington, allocated funds are based on enrollment numbers; in Montana and Oregon they are not. In all of the states, allocations are received via competitive grants. (NWREL interviews with certification officers)

At the federal level, the government is making a significant contribution to the professional development of teachers. It is estimated that in 1993, 369 million federal dollars were spent on teacher development programs in science, mathematics, and technology. Chapter II of the Elementary and Secondary Education Act (ESEA) and the Eisenhower State Mathematics and Science Program had allocations of 246 million dollars in the same year. Legislation passed in 1994 increased the federal support for professional development for teachers. Most of the funds were provided to states via Goals 2000 and have been passed on to local districts. There have been new increases in ESEA funding for the Eisenhower Program (Title II).

Other national resources include the School-to-Work Opportunities Act (to support middle and high school academies for future teachers), Bilingual Education grants, and Title I grants. An important change in Title I funding places no ceilings on amounts that can be expended for professional development.

With little comprehensive data available it is difficult to determine whether the current resources for professional development are adequate. To address this issue, the National Staff Development Council recommends that local school districts clearly identify professional development factors as part of their overall strategic plans and then make these line items in the budget.

**Directions in Professional Development**

In the past, professional development efforts were driven primarily by the state requirements for maintaining a teaching certificate. These requirements focused on a set number of course or credit hours to be completed within a given time-frame. Generally what was studied as content reflected individual teacher's choices or was determined in a "one-size-fits-all" inservice offering within a district or school. Current perspectives regard effective professional development as a

career-long effort that should be closely tied to goals and outcomes determined by the school, the district, and the community; that is, a more eclectic approach to professional development is discouraged in favor of a more deliberate, planned approach. States are still responsible for determining licensing requirements but can impact the nature of professional development activities by mandating certain standards; technology education is but one example.

### Technology Training and Development

Public and private sectors are investing vast amounts of resources on technology infrastructures with the computer at the center. The adult world expects that upon graduation, students will be knowledgeable about and able to work with computers. Schools, as part of the public sector, are rising to the challenges of wiring and equipping classrooms with enough machines for student and teacher use. However, many teachers entered teaching when there were few, if any, computers. Before they can teach students, these teachers need training. Other teachers indicate that in spite of training on various software programs, they have limited training on useful classroom applications. Further, when few computers are available in classrooms, there are indications that many teachers still teach as they have in the past. Until current teachers are trained in applying the technology to the content of their disciplines, it will not be fully utilized. Recently, many states, such as Montana, have mandated technology education standards for teachers. Oregon and Washington require technology training for licensing (Edwards, 1997). These actions further impact the direction of professional development.

New teachers are more experienced with computers, often through personal use. Most receive some training in their preparation programs, but the extent of such varies from institution to institution. In order to assure that undergraduate teacher candidates have appropriate technology training in their preservice programs, the NCATE has increased the standards in technology education effective by the year 2000. These standards will have a widespread impact given the fact that many national reports advocate that schools of education work to become NCATE accredited.

Mandates by the states and the NCATE standards are driving the direction of professional development both regionally and nationally by creating compulsory aspects. Even without formal standards, states recognize the need for continued and upgraded training for teachers in technology education. According to data concerning the Northwest states, the percentage of teachers trained in technology use is low: Alaska, 21 percent; Idaho, 15 percent; Montana, 18 percent; and Oregon, 15 percent (Washington statistics were not available). All of the states have received Technology Literacy Challenge Fund monies in 1997 and 1998 to support access and training efforts.

## Future Needs

Professional development is a dynamic vehicle through which teachers can implement important educational changes. To have an impact, standards for professional development must be in place to ensure that staff development makes a difference in student learning. These standards should address three distinct areas: the context (the organization and culture in which the new learnings

will be implemented), the process (the means of acquiring new knowledge and skills), and the content (the actual skills and knowledge needed for effectiveness) (National Staff Development Council, 1995).

Teacher development ought to be viewed as a professional continuum based on the notion that continuous improvement is never finished. One model begins the process with recruitment and selection of candidates into teacher education programs. These preservice programs are NCATE accredited. An initial intern license is awarded based on the Interstate New Teacher Assessment and Support Consortium (INTASC) tests of subject matter and teaching knowledge. New teachers are inducted into a 1-2 year early career mentoring and evaluation program. Continuing licenses are granted via a variety of performance assessments. Professional development is ongoing, both in and out of the classroom. Advanced certification is attained based on the National Board for Professional Teaching Standards (NBPTS). (The National Commission on Teaching and America's Future, 1996).

The public should be educated about the complex nature of the teaching-learning environment, particularly as it relates to professional development activities. The improvement of teachers is seen as an asset to the schools—particularly in terms of higher student achievement. However, public misperceptions about how teacher improvement occurs hamper support for dynamic professional development.

In sum, the 1996 report by the National Foundation for the Improvement of Education, *Teachers Take Charge of Their Learning*, does as good a job as any at clearly and succinctly articulating the need for the professional development of teachers when it states:

> ...professional development needs to be embedded in the job of teaching, to enable teachers to balance individual and school needs in choosing what to learn, and to ensure the quality and productivity of professional development through the setting of professional standards. The state role should ensure adequate time for professional development; connect professional development to school-based management and staff decision making; promote partnerships linking teachers, academics, and teachers' organizations; ensure equitable funding for the growth of all teachers, especially those serving the poor; establish exemplary schools as laboratories that support visits by teams of teachers; and promote collaborative work and learning by including a broad range of work in schools as part of what counts toward recertification. Central school district offices should, for the most part, go out of the business of designing and delivering continuing education programs or hiring commercial companies to do it for them. Professional development is the business of the staff of each school and of the profession at large (p. xvii).

When teacher preparation and professional development needs are met, and appropriate documentation and data exist that demonstrate their impact on student achievement, then teaching will have made a significant step in terms of its own development as a profession.

## Summary

- Teachers are motivated to continue studying and growing as professionals in order to improve student achievement, improve teaching skills, and increase their own knowledge.
- Most teachers participate in school-or district-sponsored workshops or inservice programs for professional development.
- Decisions regarding professional development activities are generally made at the local level.
- Most schools and school districts continue to inservice teachers on topics independent of experience, needs, or circumstances.
- The professional development training model of the "one-shot" workshop of half-day length is not effective in bringing about any sustained change in teacher behaviors.
- Eighty-five percent of teachers participating in professional development activities agreed that the programs provided them with new information.
- Less than half of teachers reporting on professional development experiences changed their views on teaching as a result of the activity.
- Time is the critical element in continued training, both time spent in learning and time spent in practicing and evaluating results.
- Few local resources are devoted to professional development (about 3 to 5 percent of local operating costs).
- Costs for professional development at the state level range from less than 1 percent to over 3 percent of total state spending on education.
- Federal support of professional development is significant through a variety of grant programs.
- Mandates by the states and the NCATE standards are driving the direction of professional development by creating compulsory aspects. One example of this is technology education.
- Teacher development should be viewed as a professional continuum based on the notion that continuous improvement is never finished.

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