

Policy Research

Published by the Texas Education Agency Policy Planning and Evaluation Division

Teacher Supply, Demand and Quality Policy Research Project

Working Conditions of Texas Teachers

This presentation is the first of a series of research papers in the area of teacher supply, demand, quality, and policy that will provide a cross-sectional analysis of the current teaching force. Teacher supply is defined as the total number of eligible individuals available from all sources who are willing to supply their services to teaching under prevailing conditions. These conditions include salaries, benefits, the teaching workplace, the work day, the work load, and the work atmosphere.

Teacher salaries, the most commonly discussed characteristic of teacher working conditions, are examined in relation to tenure, subject taught, campus type, and student population. School staffing patterns and teacher class schedules are reviewed in conjunction with salaries. The condition of Texas school facilities, as well as the atmosphere inside those facilities, are also part of the working condition of Texas teachers.

Although competing occupations attract teachers away from the teaching profession, an increasing number of individuals are pursuing teaching as a second career through alternative certification programs. Educational aides also provide an untapped source of potential teachers.

Report Number 2, July 1993

Teacher Supply, Demand, and Quality Policy Research Project

Throughout the 1960s and 1970s, studies measuring teacher supply and demand relied upon traditional mechanical or mathematical models. Mathematical models are based primarily on current trends in student/teacher ratios and projections of student enrollment.

These models proved to be inadequate as teacher shortages in specific teaching areas reported in the early 1980s could neither be confirmed nor discounted by a national panel of experts. This finding led to an effort by the National Center for Education Statistics (NCES) to generate information to improve supply and demand studies through the remainder of the decade.

By 1990, national research emphasized the use of behavioral models and the measurement of teacher quality. Behavioral models attempt to link supply and demand estimates with changing economic conditions and policies. The first national conference on teacher supply, demand, and quality was conducted in 1991.

This year the Texas Education Agency (TEA) joined a cooperative research project sponsored by the Southern Regional Education Board (SREB) to develop a behavioral model of educator supply and demand for Texas and the southern region of the United States. The SREB will integrate data gathered from state agencies in each state to follow prospective teachers from the time they enter college through their teaching careers.

The two-year study will compare the performances of education students on college entrance examinations and basic skills tests with those of the university student population as a whole; compare employment and related statistics of graduates of education programs with those of graduates of other programs; analyze pre-certification test data; and finally, examine circumstances surrounding entry to and exit from the education work force.

The resulting behavioral model will simulate variations in the supply of and demand for teachers and administrators brought on by proposed changes in state-level policies and

predicted changes in economic conditions.

At the same time the TEA is conducting a cross-sectional analysis of the current teaching force to study teacher supply, demand, and quality. In five upcoming issues, *Policy Research Report* will examine the principle factors shaping each of these topics, as well as policy questions that impact the teaching profession. The reports will combine quantitative and qualitative information from data submitted to the TEA by school districts and test vendors, data and opinions from national surveys conducted by the NCES, and information gathered from other sources of state and national education research.

The five-part series is meant to provide a framework for discussion and, where possible, present information that portrays the condition of Texas teachers. Chart 1 on the following page outlines the focus of each report. This issue of *Policy Research Report* looks at working conditions of Texas teachers, the effects of labor conditions on teacher supply, and policy questions concerning military downsizing and competing occupations.

Chart 1
Teacher Supply, Demand, and Quality Policy Research Project

Supply	Demand	Quality	Policy
Working Conditions Labor Conditions			Military Downsizing and Competing Occupations
	Enrollment and Student/Teacher Ratio	Demographic Matching of Teachers and Students	Recruitment
Teacher Migration and Retention	Funding Capacity	Teacher Qualifications and Tested Ability	
Teacher Retirement and Attrition		Teacher Attitudes and Perceptions	Teacher Professionalism
Applicants for Teaching Positions	Unmet Needs		Classroom Teaching Practices

Five forthcoming issues of Policy Research Report will examine the current teaching force by conducting a cross-sectional analysis of the topics relating to teacher supply, demand, quality, and policy listed above. This five-part series will investigate each topic in order to provide a framework for discussion and a portrait of the condition of the Texas teaching force.

***Teacher supply** is defined as the total number of eligible individuals available from all sources who are willing to supply their services to teaching under prevailing conditions. **Demand** is the number of teachers school districts are able to fund and willing to employ at a given time. **Quality** is defined broadly to cover individual teacher characteristics such as competency in subject matter and classroom performance, school characteristics, and policy characteristics related to professionalism. **Policy** emphasis at the state level, as well as school district policy and practice, together have an effect on teacher supply, demand, and quality.*

Working Conditions of Texas Teachers

Teacher Salaries

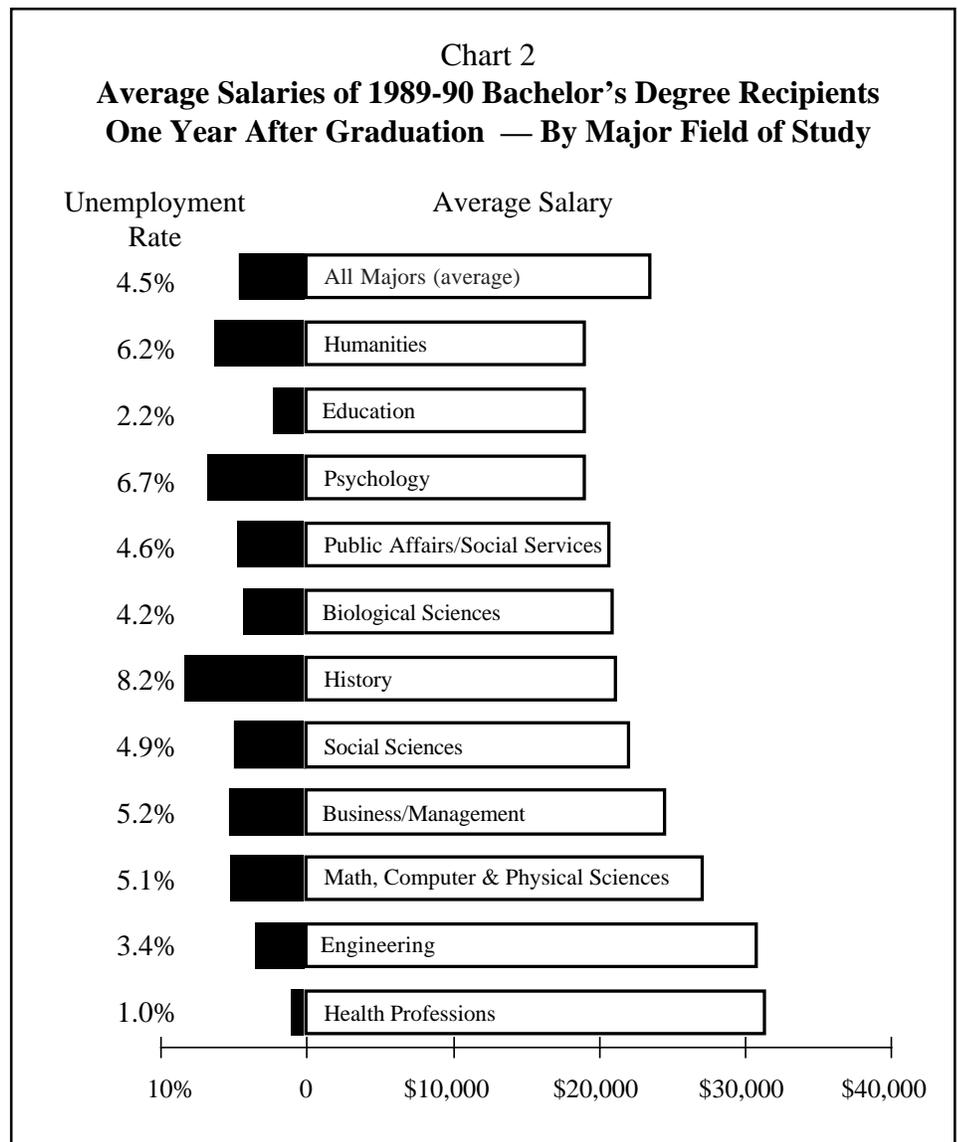
Teacher supply is defined as the total number of eligible individuals available from all sources who are willing to supply their services to teaching under prevailing conditions. Teacher salaries are typically the only characteristic examined in comparing the teaching profession to other occupations. Chart 2 compares the salaries and employment rates of 1989-90 college graduates by major field of study. Salaries of education majors are significantly lower than the average for all recent graduates combined. Trends in beginning salaries for college graduates show that this relationship has existed for at least 20 years. Comparisons of salaries of teachers to earnings in other professions show that the gap often increases throughout the professional career.

The percent of education majors employed is significantly higher than the average for all recent graduates combined. A large proportion of the majors in some fields of study enroll

Salaries and unemployment rates are shown for bachelor degree recipients by field of study. Although education majors have a lower unemployment rate, their salary is among the lowest reported for all recent graduates.

in graduate school following graduation. However, when the unemployment rate is calculated based only on those looking and available for work, only the health professions have a lower unemployment rate of recent college graduates than education majors.

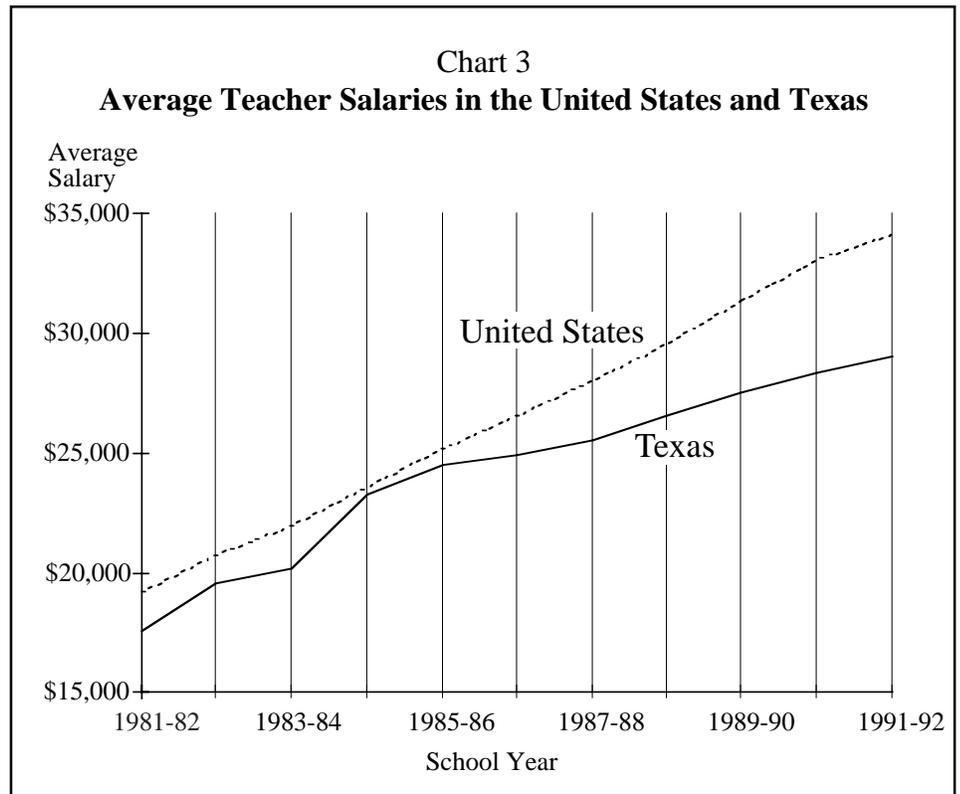
Texas does not compare favorably with other states in average teacher salaries. Comparisons across states must be made cautiously because states calculate salaries differently. However, general trends are informative.



In 1991-92, Texas ranked 35th nationally in teacher salaries. The average salary of \$29,041 was 15 percent below the national average of \$34,148. As Chart 3 illustrates, average teacher salaries in Texas rose to the national average in 1984-85, aided by a large increase in state and local funding for schools from House Bill 72, comprehensive school reform legislation passed by the 68th Texas legislature in the summer of 1984.

Texas teacher salaries have since increased at a much slower rate than teacher salaries nationally, resulting in the current difference. When adjusted for the 40 percent increase in the cost of living between 1982 and 1992, teacher salaries nationally and in Texas reflect only moderate increases in buying power.

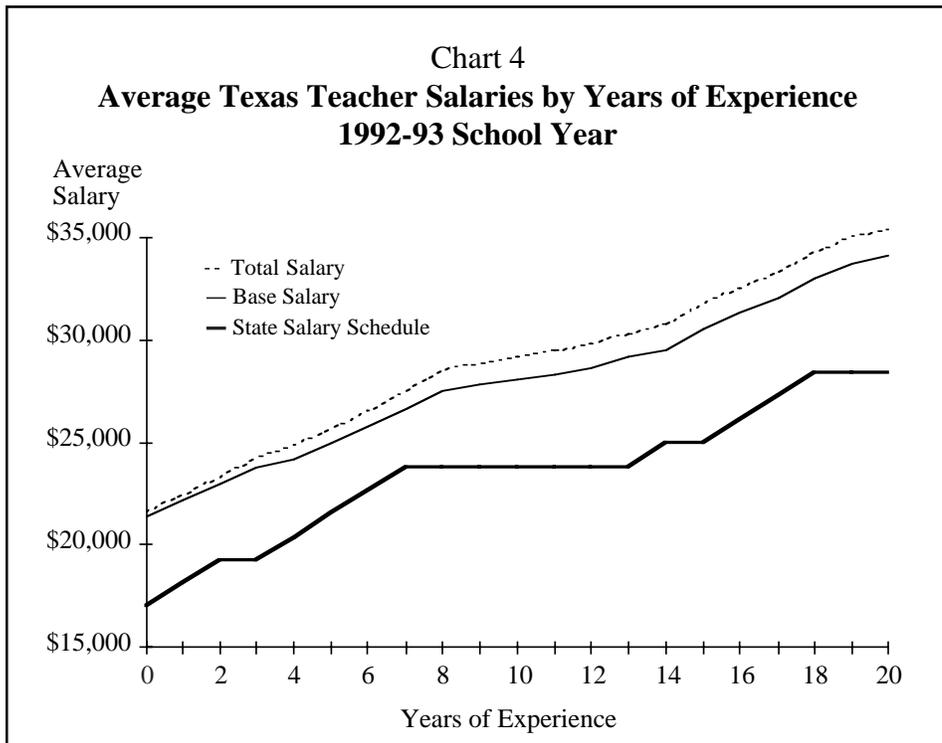
A simple comparison of average teacher salaries is not sufficient to explain Texas teacher salaries. Teacher salaries increase as the teacher gains professional experience. The Texas Public Education Compensation Plan provides a required minimum base salary



schedule for teachers and other education professionals. The average base salary of beginning teachers is \$4,365 a year above the \$17,000 minimum required by the state salary schedule. Chart 4 shows average

Texas teacher salaries by years of experience. Average experience of teachers varies from state to state and within states by subject taught, campus type, and student population served.

(Continued on page 6)



The Texas state salary schedule sets mandatory minimum salaries for teachers based on years of experience. Teacher base salary is the contracted salary for regular teaching duties. Supplements to this salary are paid for such things as career ladder, athletics, club sponsorships, and band or orchestra assignments. The base salary plus supplements is the total teacher salary.

Many school districts have not made career ladder decisions by the time salary data are reported to the Texas Education Agency. It is estimated that state average total salaries would be about \$570 higher if all career ladder supplements were included.

Economic Conditions

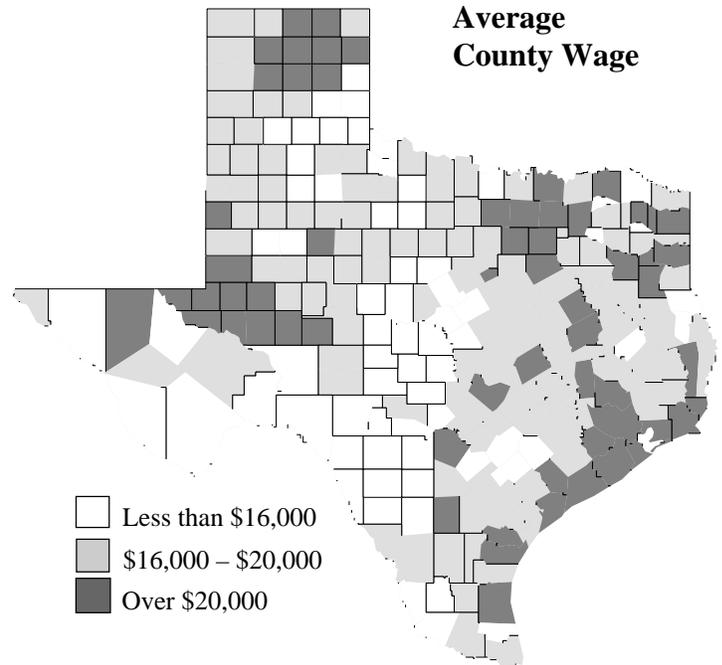
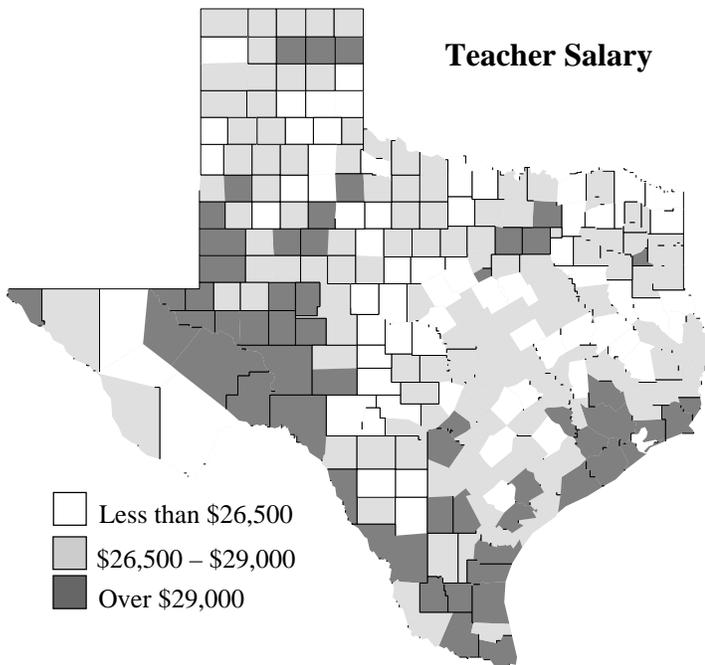
The economic condition of Texas school districts is influenced by unemployment rates and wage levels outside the education profession, as well as district property values and tax burden.

The maps on this page show that Texas teacher salaries do not vary with average county wages. The average wage in counties along the border and in West Texas is generally low; however, teacher salaries in these areas are higher than the state average. In East and North Texas the situation is reversed with the average county wage above the state average but teacher salaries below the state average.

School district wealth is defined as total taxable property value within the district divided by enrollment of students. Wealth is typically used as an indicator of a district's ability to raise local funds. Most local revenue is generated from local property taxes. Total tax effort includes both maintenance and operations taxes and debt service taxes. Wealth and tax effort are two major determinants of district fiscal capacity.

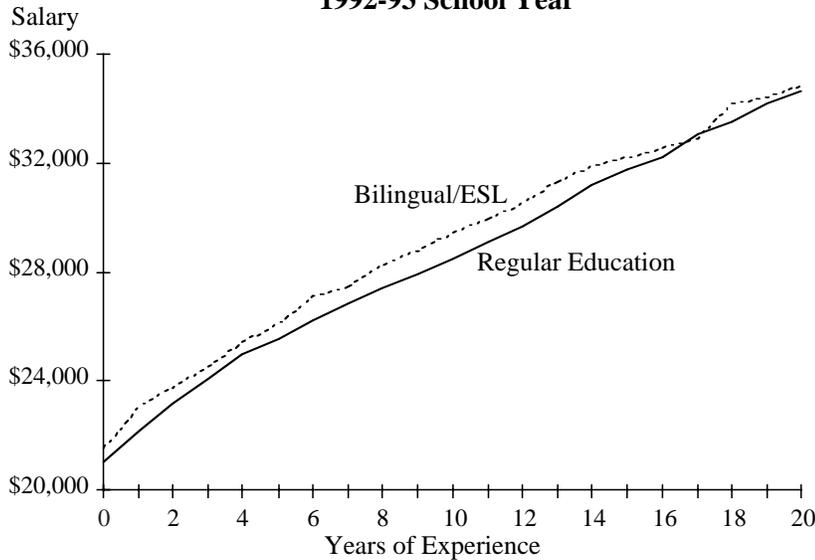
Teacher salaries and classroom size in square feet generally increase as district wealth and local tax effort increase. Percent of classrooms rated poor or below average decreases as district wealth and tax effort increase.

Wealth	Average Teacher Salary	Room Size (Sq. Ft.)	% of Rooms Below Average or Poor
Under \$76,272	28,895	735	5.5
\$76,272 – \$90,118	28,079	740	4.6
\$90,119 – \$106,053	29,084	754	4.4
\$106,054 – \$124,839	28,071	756	2.3
\$124,840 – \$140,577	28,830	770	2.6
\$140,578 – \$165,104	28,769	764	1.5
\$165,105 – \$202,678	29,134	774	1.9
\$202,679 – \$259,734	29,666	776	3.5
\$259,735 – \$438,516	31,736	786	2.3
Over \$438,516	31,586	828	1.3
Total Tax Effort			
Under 1.0519	29,104	761	5.7
1.0519 – 1.1541	28,923	760	3.7
1.1541 – 1.2517	29,446	770	2.3
Over 1.2517	29,655	770	1.8

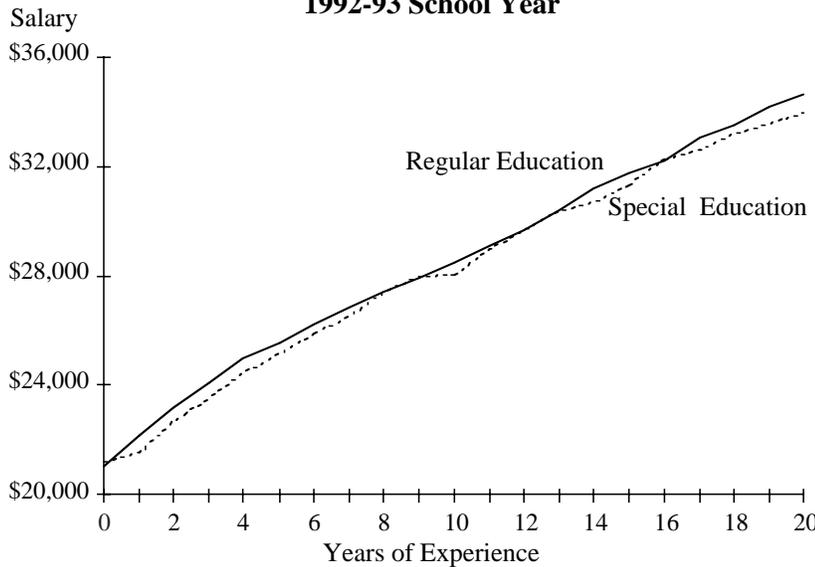


(Continued from page 4)

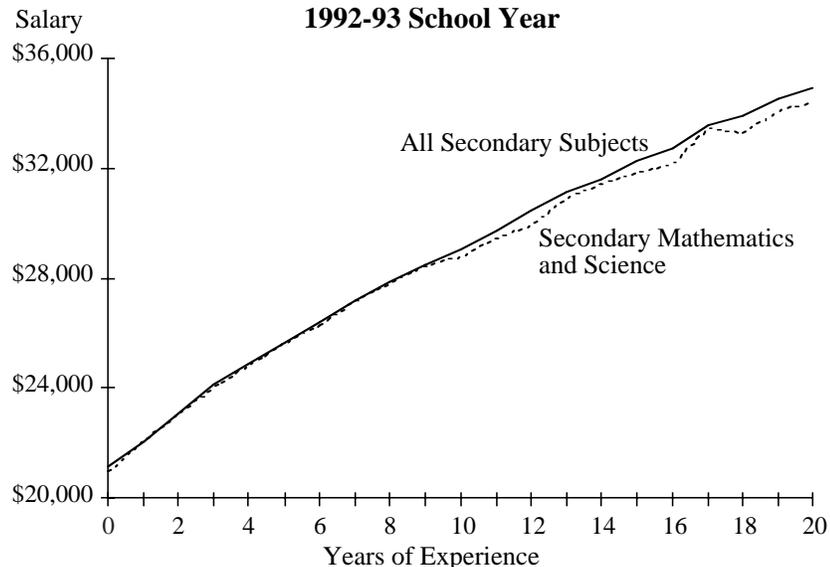
**Chart 5 — Texas Teacher Salaries by Years of Experience
1992-93 School Year**



**Chart 6 — Texas Teacher Salaries by Years of Experience
1992-93 School Year**



**Chart 7 — Texas Teacher Salaries by Years of Experience
1992-93 School Year**



Even among teachers with the same number of years of experience, salaries vary by subject taught, campus type, and population served. For the past four years, the U.S. Department of Education has designated bilingual education and special education as teacher shortage areas in Texas. As Charts 5 and 6 show, districts have not responded by offering substantially higher salaries to attract and retain teachers in these shortage areas. Bilingual education teachers make slightly higher salaries than regular education teachers with the same years of experience, and special education teachers make slightly lower salaries.

For the 1993-94 school year, secondary mathematics and science were also designated as shortage areas. Shortages of mathematics and science teachers are attributed in part to higher salaries offered mathematicians and scientists in competing occupations. As Chart 7 illustrates, school districts apparently are not trying to compete for mathematics and science teachers by offering them higher salaries.

Teachers can be grouped based on the types of students they serve, the subject area taught, the student grade level, or the type of campus on which they teach. Charts 5 and 6 show teachers grouped by students served: bilingual education or English as a second language, special education, and regular students. Chart 7 compares salaries by years of experience for all secondary teachers (grades 7 to 12) and secondary mathematics and science teachers.

Two areas in which teachers do receive higher pay are shown in Charts 8 and 9. Teachers of gifted and honors classes receive higher salaries than teachers of compensatory and remedial education classes throughout their careers. Physical education and health teachers receive higher salaries when compared to all other secondary teachers, a difference that increases as years of experience increase. Most of the salary difference can be attributed to supplemental pay that physical education teachers receive for coaching athletic teams.

Chart 10 shows that beginning teachers receive the same pay regardless of campus type. As years of experience increase, however, high school teacher salaries increase at a faster rate than middle school or elementary teacher salaries. This can be attributed in part to supplemental duties for which teachers receive additional pay, such as coaching students in athletic activities and sponsoring school clubs or publications. These activities are more prevalent in high schools.

(Continued on page 9)

Teacher salaries vary for different groups of teachers. Chart 8 compares salaries of teachers serving gifted and honors students with those teaching compensatory or remedial classes. Chart 9 reflects all secondary teachers and secondary physical education or health teachers. Teachers grouped by the type of campus at which they teach are shown on Chart 10.

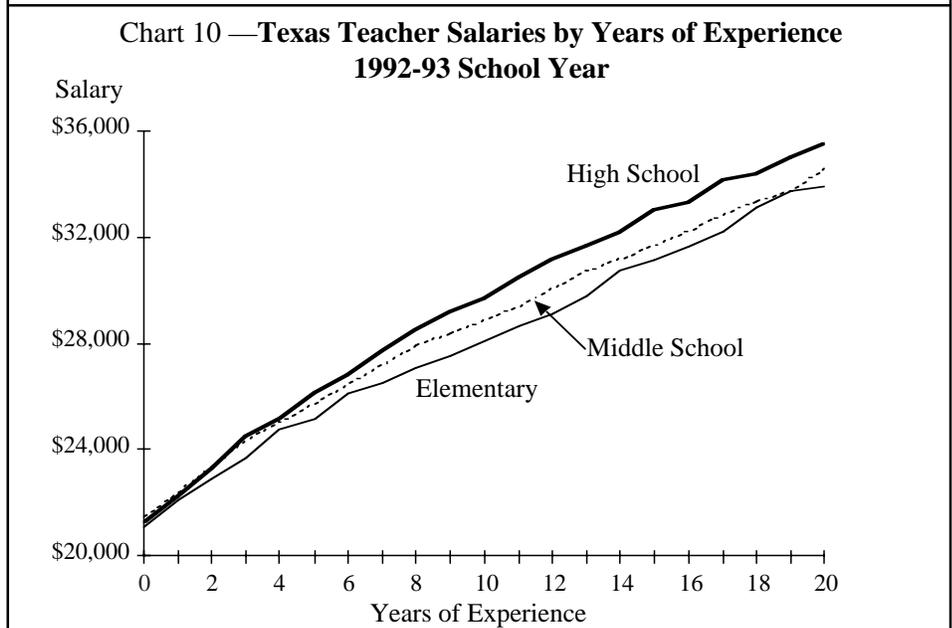
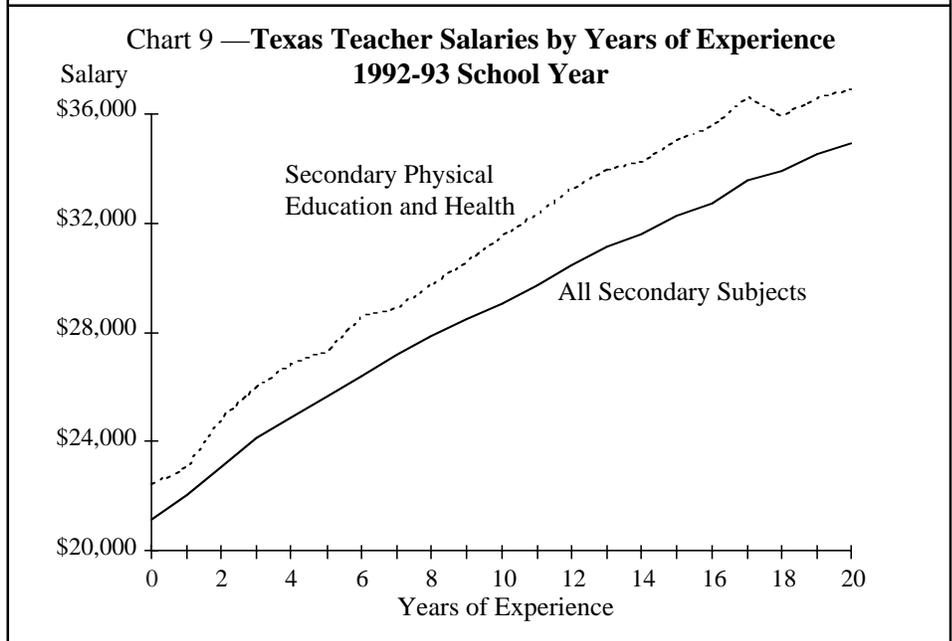
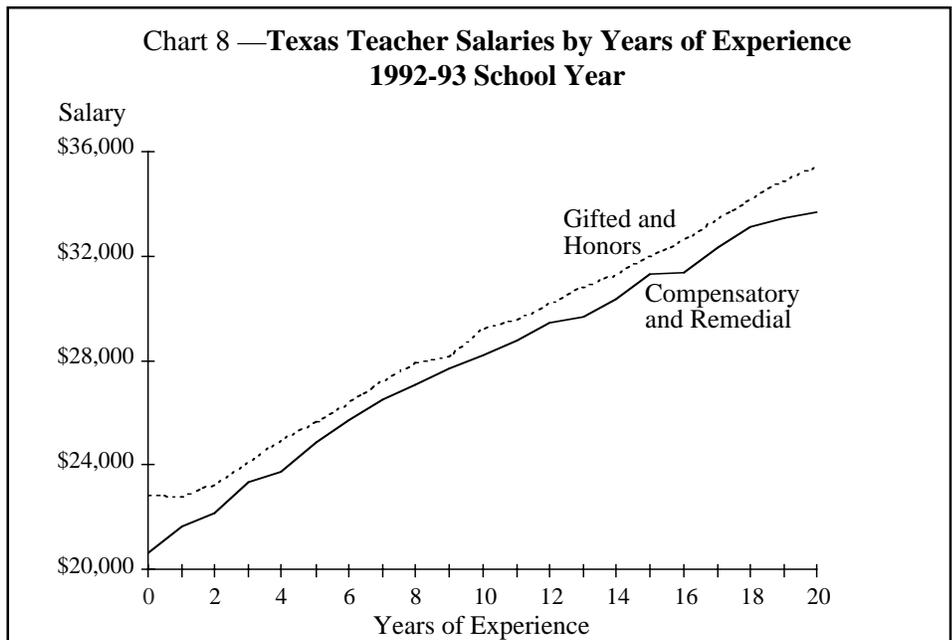
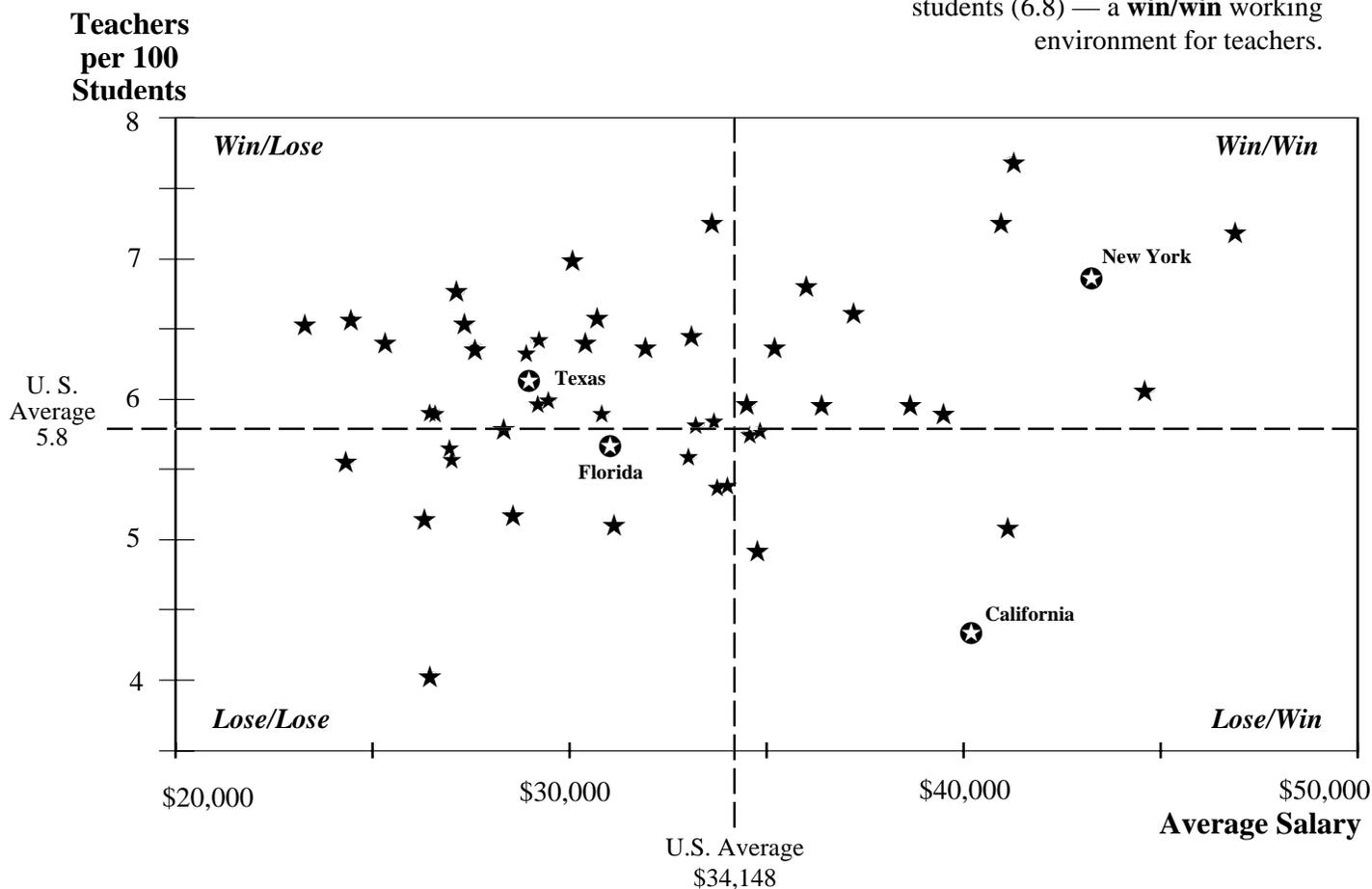


Chart 11

United States Average Teacher Salaries and Teacher-Pupil Ratios 1991-92 School Year

Texas has an above average number of teachers per 100 students (6.1 teachers per 100 students in 1991-92), but below average teacher salaries (\$29,041 in 1991-92) — a **win/lose** working environment for teachers.

Relatively high salaries and low pupil-teacher ratios are two elements of a favorable teaching environment. **New York** ranks third in the nation in average teacher salaries (\$43,335) and fifth in number of teachers per 100 students (6.8) — a **win/win** working environment for teachers.



Although higher than Texas, **Florida** teacher salaries are over \$3,000 a year below the national average. At 5.7 teachers per 100 students, Florida ranks below both the U.S. average and the Texas average — a **lose/lose** working environment when combined with low salaries.

California schools have only 4.3 teachers per 100 students, 30 percent fewer teachers than Texas, yet average teacher salaries are \$40,192, 38 percent higher than Texas — a **lose/win** working environment for teachers.

(Continued from page 7)

Salaries also vary based on district funding capacity. In 1985, poor Texas school districts directed new funds resulting from passage of House Bill 72 to teacher salaries. To a great degree, teacher salaries were equalized across the state. Today there is some variance in teacher salaries by district wealth, size, and growth rate. Teacher salaries increase as district wealth and size increase, and decrease as growth rate increases.

District administrators must also balance the need for more experienced and higher quality teachers who can demand higher salaries with the desire to keep classes small, which requires more teachers. Chart 11 illustrates the choices made by each state between teacher salaries and number of teachers.

Although Texas teacher salaries are low compared to other states, the number of teachers per 100 students is higher than average. The smaller classes that result provide a positive working environment for teachers.

Within Texas the ability of district administrators to adjust the quality/quantity relationship of teachers and

Texas school districts with lower expenditures per pupil have more pupils per teacher and teachers per campus administrator than districts with higher expenditures. These same districts, however, have an average teacher salary similar to that of all other districts. This may reflect a priority among all districts to maintain teacher salary levels at the cost of pupil-teacher ratios.

students is restricted in the early elementary grades by a mandated maximum class size of 22 students in grades kindergarten through four. The one year of data in Chart 12 suggests that Texas administrators, when faced with budgetary constraints, have chosen to maintain teacher salaries by increasing both pupil-teacher ratios and teacher-administrator ratios.

Benefits

Texas school districts reported expenditures of \$259 million on group health and life insurance benefits for all employees in 1991-92. Health and life insurance accounted for 3.9 percent of payroll expenditures in districts offering these benefits. Total benefits, including social security and teacher retirement, made up 6.4 percent of district payroll expenditures or \$452 million.

A Texas State Teachers Association survey of the 976 Texas school districts with a four-year high school found that only eight districts had no group health insurance coverage for their employees in

1992-93. Twenty-seven of the districts not included in that survey reported no expenditures for group health and life insurance in 1991-92. These 35 small, rural districts have 518 teachers.

Concern about making health insurance available to school employees can quickly become overshadowed by the cost of insurance. The median 1992-93 monthly premium for family health insurance coverage reported by the surveyed districts is \$350-\$399. The median contribution by districts is \$100-\$125. Forty-four districts make no contribution.

Supplies and Equipment

In 1991-92 Texas school districts spent an average of \$841 per teacher on low-cost administrative and instructional supplies such as paper, pencils, workbooks, computer diskettes, and audiovisual aids such as videotapes. Small districts spend more per teacher on supplies than large districts. Expenditures for instructional and administrative

(Continued on page 12)

Chart 12
Average Texas Teacher Salaries and Staffing Levels
1992-93 School Year

Number of Districts	Operating Expenditures Per Pupil	Average Teacher Salary	Pupils Per Teacher	Teachers Per Campus Administrator
210	Over \$5,327	\$29,026	11.2	18.1
210	\$4,518 to \$5,327	\$29,737	14.3	20.1
210	\$4,076 to \$4,517	\$30,202	15.7	20.0
210	\$3,714 to \$4,075	\$29,277	16.0	21.2
210	Under \$3,714	\$28,726	16.4	21.1
1,050	State Total	\$29,365	16.1	20.7

U.S. Department of Education Designation

Each year, the U.S. Department of Education (U.S.D.E.) requests that the states submit proposed teacher shortage areas for establishing deferment for borrowers under certain federal loan programs. The U.S.D.E. designates teacher shortage areas based on information provided by the states. The commissioner of education then notifies all school district superintendents and principals of the shortage area designations for Texas.

The 1993-94 Texas shortage area proposal was based on teachers on emergency permits during the 1991-92 school year. For each subject submitted as a shortage area, the full-time equivalent (FTE) of teachers with emergency teaching permits was expressed as a percent of the total FTE of teachers teaching in that area. The FTE count for teachers with split assignments (teaching some classes under permit and some classes under full certification) was split accordingly.

Specific courses were aggregated into the broader subject areas. Grouping by broad subject area rather than specific subjects does not provide sufficient data for analysis of some subjects. For example, analysis of disaggregated data for vocational education and foreign languages would be necessary to determine the extent of shortages in those areas. There is also a need for further analysis of academic computer science and vocational computer science courses.

Shortage Area Priorities

Objective 2 of the Texas Education Agency Strategic Plan is to raise the level of student achievement by attracting and retaining a qualified and demographically representative public education work force so that, by 1998, 98 percent of teachers are certified in the area in which they are teaching.

Texas Teacher Shortage Areas

Subject	Teachers	Percent of Total Teachers	Teachers on Permit	Percent of Teachers on Permit
Bilingual Education (PK-12)	13,202	6.4%	1,073	8.1%
Special Education (PK-12)	18,884	9.1%	982	5.2%
Science (Grades 7 - 12)	9,034	4.3%	316	3.5%
Mathematics (Grades 7 - 12)	10,875	5.4%	350	3.2%

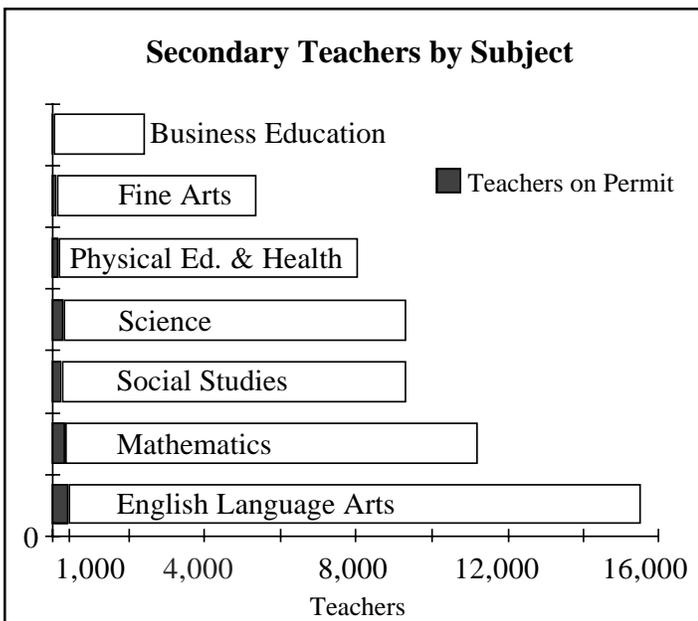
All subject and instructional areas have more than two percent of teachers on emergency teaching permits except gifted and talented, regular elementary, secondary physical education and health, and business education.

Bilingual/English as a Second Language

Six percent of the Texas teaching force is represented by bilingual education and English as a Second Language (ESL) teachers. With eight percent of these teachers on emergency teaching permits, this is the area in which the largest proportion of Texas teachers is not fully certified for the classes to which they are assigned. In addition, this is an area in which the need is increasing because the population of students needing bilingual or ESL classes is growing faster than the student population as a whole. The Texas student population has increased by 18 percent in the last decade; however, the number of limited English proficient students has increased by 53 percent.

Special Education

Nine percent of the Texas teaching force is represented by special education teachers; five percent of these teachers have emergency teaching permits. This represents a large number of teachers on permit as well as a large



of Texas Teacher Shortage Areas

proportion of teachers. In 1991-92 fewer prospective teachers passed the state examination to become certified as special education teachers than the prior year. All levels of special education must have qualified teachers if students are to receive the early intervention necessary for long-term success and follow-through to develop skills necessary to lead independent and productive lives.

Science

Secondary science teachers currently make up over four percent of the Texas teaching force. Overall, 3.5 percent of all science teachers have emergency teaching permits. However, this average masks the full extent of the teacher shortage in science. Almost six percent of physical science teachers have emergency teaching permits. Introductory Physical Science is a low level course that will not be taught after the 1991-92 school year. Physical Science is a ninth grade course that most districts offer to meet the state graduation requirement of two science credits.

Teacher Shortages in Mathematics

Subject	Teachers	Teachers on Permit	Percent Teachers on Permit
Fundamentals of Mathematics	359	24	6.6
Pre-Algebra	1,140	65	5.7
Consumer Mathematics	395	21	5.4
Mathematics, Grade 7	1,956	80	4.1
Math of Consumer Economics	165	6	3.5
Informal Geometry	369	12	3.3
Mathematics, Grade 8	1,638	53	3.2
Algebra I	1,792	48	2.7
Computer Mathematics I	233	4	1.7
Geometry	1,209	20	1.7
Calculus	144	2	1.3
Algebra II	960	11	1.1
Computer Mathematics II	26	0	1.0
Trigonometry	237	2	.8
Pre-Calculus and Other Advanced Classes	229	1	.5

In higher level science courses fewer teachers have emergency teaching permits; however, schools have the option of not offering higher level courses that are not required for graduation credit if qualified teachers are not available. Even so, more than three percent of biology, chemistry, and earth science teachers have emergency teaching permits.

Mathematics

Grade 7 and 8 mathematics teachers make up almost two percent of the Texas teaching force; over four percent of these teachers have emergency teaching permits. This area is of particular concern because of the low mathematics test scores in grades 7 and 9 on the statewide assessment. In 1991-92, only 51 percent of seventh grade students and 44 percent of ninth grade students passed the mathematics section of the Texas Assessment of Academic Skills, a criterion-referenced test given in the odd-numbered grades. Less than 25 percent of African American and Hispanic students passed the mathematics tests. The need for a strong mathematics foundation in the middle grades to prepare all students to master Algebra I objectives in ninth grade is critical.

High school mathematics teachers currently make up almost four percent of the Texas teaching force. Overall, three percent of all high school mathematics teachers have emergency teaching permits. However, this average masks the full extent of the teacher shortage in mathematics. Almost six percent of Fundamentals of Mathematics, Pre-algebra, and Consumer Mathematics teachers have emergency teaching permits. Although less than three percent of Algebra I teachers have emergency teaching permits, this would increase to over four percent if all students from low level mathematics courses were enrolled in Algebra I, as will be required in the future.

Teacher Shortage Area Loan Deferments

The federal designation of teacher shortage areas enables borrowers to qualify for deferment of loan repayment under the Federal Stafford Loan and Federal Supplemental Loans for Students programs and for the Paul Douglas Teacher Scholarship Program. Information provided by the Texas Guaranteed Student Loan Corporation reflects a marked increase in the number of deferments granted from 55 in May 1992 to 131 in May 1993. In addition, the total net volume of deferred loans more than doubled during this period.

(Continued from page 9)

supplies increase as total district operating expenditures increase, as illustrated in Chart 13.

The availability of money for consumable and low-cost supplies does impact the teacher's working environment. Over half of Texas teachers responding to a 1992 Association of Texas Professional Educators (ATPE) survey reported they spent more than \$100 a year of their own money on classroom supplies and materials.

The availability of technology in the school can impact both instructional and administrative facets of the teacher's work. The 1991 facilities inventory counted 252,111 personal computers in Texas schools, just over one computer per teacher. This includes instructional computers and those used to support administrative services.

Wealthier districts have more computers. The number of computers per teacher also increases as total district operating expenditures increase, as illustrated in Chart 13. Elementary schools have the fewest computers per teacher; high schools have the most.

Supervision and Caseload

Texas school districts employ an average of 21 teachers for every one campus-based administrator. The average campus employs 36 teachers and one principal. There is one assistant principal or supervisor for every two campuses.

The number of teachers per campus administrator decreases as districts get smaller, but varies only slightly based on the district wealth. There are fewer teachers per administrator in districts with higher

operating expenditures per pupil, as illustrated earlier in Chart 12. The number of teachers per campus administrator has increased slightly each year since 1990.

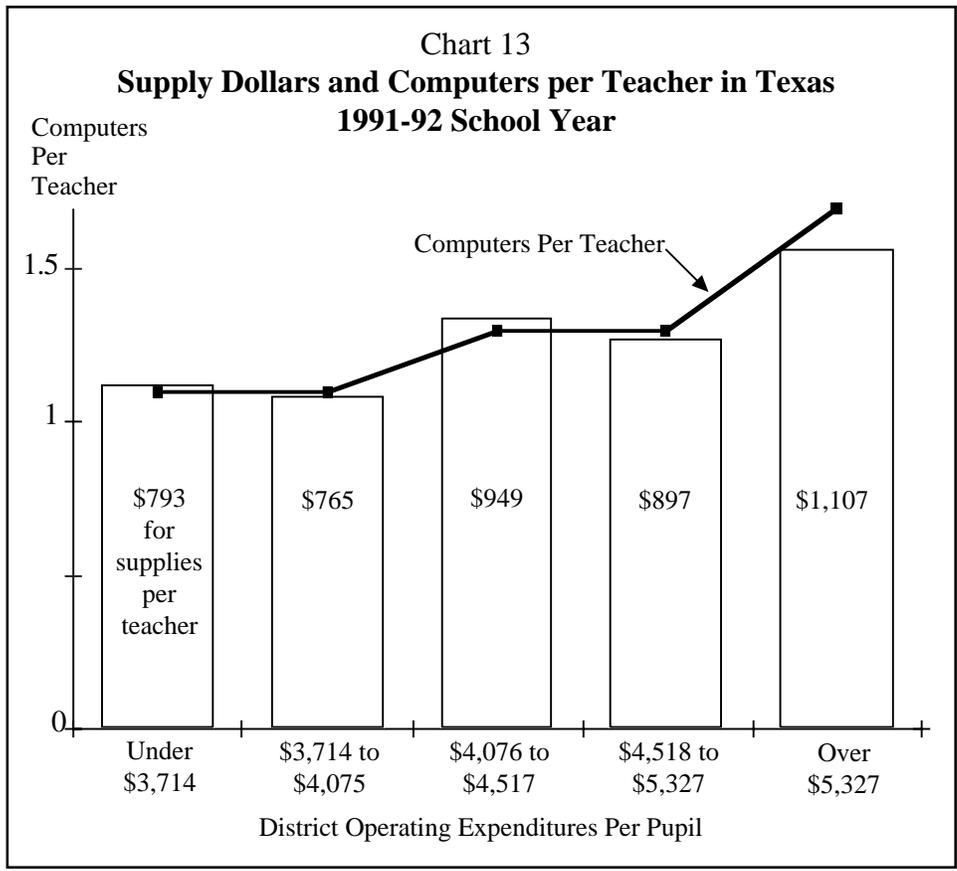
The teaching force has grown at about three percent a year for the past three years. In contrast, the growth rate for administrators has declined each year. This decline in number of administrators can be attributed in part to a concern by state policymakers with efficiency and school district administrative expenditures.

Legislation passed in 1991 required the TEA to report on school district administrative expenditures and instructed districts to reduce excessive administrative costs. Twenty-two percent of districts responded by reducing administrative staff. Forty-five percent also responded by revising administrative cost reporting practices, such as reclassifying administrative positions to professional support.

The number of pupils per teacher and class size are indicators of teacher caseload. There have been 16 pupils enrolled for every teacher each year since 1989-90. On the average, teachers in Texas have 20 students per class.

Chart 14 shows that average class size varies by subject taught. Secondary teachers prepare for five or six classes, reflecting the departmentalization of middle schools and high schools. The average secondary class size is 21 students. Secondary physical education and fine arts teachers have larger classes of 28 and 25 students, respectively, with an average work load of slightly more than five classes per day.

Elementary teachers have an average of 20 students per class. Most elementary classes are self-contained, where the teacher is with the same group of students for most of the



School districts with greater expenditures per pupil provide more technology to their teachers. The number of computers per teacher is highest among districts with over \$5,327 in operating expenditures per pupil.

school day. A few elementary campuses are partially departmentalized.

Special education teachers at all grade levels have the smallest classes, an average of ten students per class. Classes are also smaller in rural districts; however, teachers are assigned more classes per day.

Average Work Week

The standard work week for the Texas teacher is seven hours per day, five days a week, for a 35-hour work week. The Texas legislature requires 180 days of classes in the school year, plus three days dedicated to professional development, for a 37-week work year. State Board of Education rules allow longer contracts for vocational education teachers. The average contract length for vocational education teachers is 193 days or 39 weeks.

Most occupations require a 40-hour work week, 50 weeks of the year. This means that teachers spend 35 percent less time at work than other professionals. The 1992 ATPE survey found that teachers also spend five to ten hours a week outside the classroom on class-related activities. In many cases overtime work is a personal decision and comparable information on other professions is not available.

The shorter work year may be considered a trade-off for lower salaries in the field of education. If beginning salaries in the field of education shown earlier in Chart 2 were adjusted for the shorter work year, they would be competitive with beginning salaries of mathematicians and engineers. In a 1992 National Center for Education Information (NCEI) survey, 31 percent of teachers identified the long summer vacation as a main reason for their interest in teaching.

Chart 14
Class Size and Teacher Work Load in Texas
1992-93 School Year

Subject Area	Class Size	Number of Classes Taught
Elementary	20	1.9
Secondary	21	5.5
English Language Arts	20	5.6
Mathematics	21	5.7
Science	22	5.7
Social Studies	23	5.6
Physical Education and Health	28	5.4
Foreign Language	22	5.5
Fine Arts	25	5.3
Computer Science	21	5.9
Business Education	18	5.6
Vocational Education	15	5.0
Special Education — All Levels	10	2.8

Typically, elementary classes consist of one group of 20 students, taught the entire day by one teacher who covers a multitude of subjects. A few elementary campuses are departmentalized and report more than one class taught per day. Secondary teachers teach five or six classes per day. Physical education and health classes have the greatest number of students. Except for business and vocational education classes, English language arts classes have the fewest students of all secondary classes.

A shorter working year has not appealed to some segments of the teaching work force. The 1988 NCES Schools and Staffing survey found that 23 percent of public school teachers nationally held a second job at least part of the year; ten percent worked at a second job year-round. Over 40 percent of male teachers held a second job and almost 37 percent of all teachers under the age of 30 held a second job. These numbers suggest that many male teachers and many new teachers entering the profession would prefer to trade the shorter work year for higher pay. Sixty-four percent of Texas teachers responding to the 1992 ATPE survey said they would be interested in working year-round if they were compensated accordingly.

Adequate Work Site

Teachers spend most of the workday in their classrooms. The Texas Education Agency (TEA) conducted an inventory of school facilities in 1991 that provides information on the condition of the teaching work site. The overall condition of each classroom was rated as good, fair, below average, or poor. Poor classrooms were defined as highly deteriorated, requiring total replacement. Below average classrooms were those considered moderately deteriorated, requiring partial replacement.

Only about three percent of all classrooms were rated as below average or poor. One-third were rated

(Continued on page 15)

Working Conditions by Education Service Center Region

ESC Region	Number of Districts	Percent of Students	Average Teacher Salary	Average Class Size	Room Size (Sq. Ft.)	% With No Campus Security	% With Security Alarms
1 Edinburg	38	7.3	29,569	20	736	20.6	50.7
2 Corpus Christi	43	3.2	28,864	19	762	45.2	48.7
3 Victoria	41	1.6	28,486	18	772	55.6	31.9
4 Houston	55	21.0	30,633	22	782	11.4	76.7
5 Beaumont	29	2.5	29,139	19	766	46.3	38.2
6 Huntsville	57	3.2	27,679	19	757	48.6	44.8
7 Kilgore	98	4.4	27,172	19	758	37.0	50.2
8 Mt. Pleasant	48	1.5	26,541	18	743	68.4	26.3
9 Wichita Falls	40	1.2	27,175	18	746	57.7	41.3
10 Richardson	79	13.3	30,825	21	776	22.7	73.6
11 Fort Worth	77	9.2	29,156	20	755	33.1	56.4
12 Waco	78	3.3	27,522	19	759	81.3	11.3
13 Austin	56	5.8	28,074	20	775	39.1	52.4
14 Abilene	43	1.4	27,392	17	750	76.4	20.0
15 San Angelo	43	1.4	28,234	17	765	75.7	15.3
16 Amarillo	66	2.2	27,428	18	770	66.1	33.9
17 Lubbock	61	2.4	28,186	18	772	47.0	51.9
18 Midland	33	2.4	29,080	20	819	37.8	61.6
19 El Paso	13	4.2	30,485	23	774	3.7	60.4
20 San Antonio	50	8.3	30,252	21	750	17.3	34.8

Education Service Center Regions

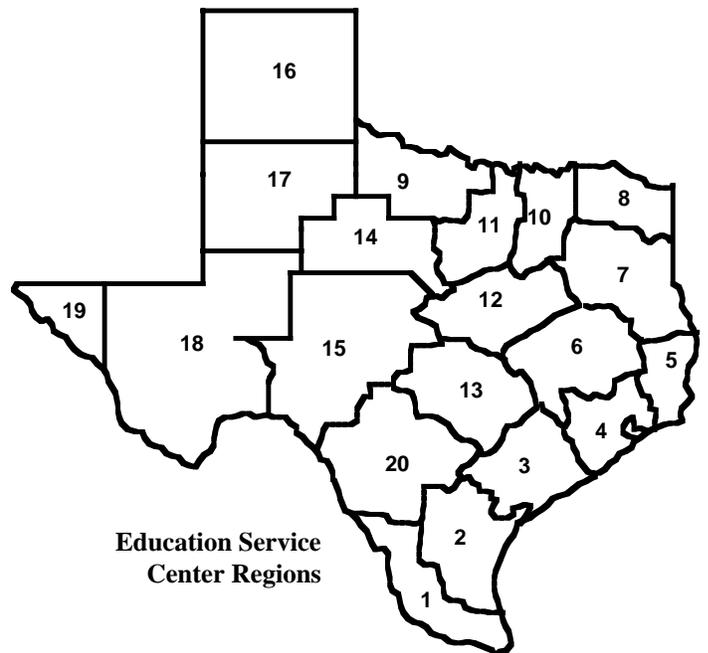
Education Service Center (ESC) regions serve different numbers of school districts and students, and each varies in the type of working conditions provided for teachers depending on the characteristics of the districts in the region.

The Houston, Richardson, and San Antonio regions serve 50 percent of the students in the state and have some of the highest average teacher salaries. Districts in the Kilgore, Mount Pleasant and Wichita Falls regions offer the lowest salaries.

Districts in the Abilene and San Angelo regions have the smallest average class size in the state; those in the El Paso area have the largest. The physical space offered per classroom varies also. Districts in the Midland region have the largest classrooms, while those in the Rio Grande Valley region of Edinburg have the smallest classrooms.

At the time of the 1991 school facilities inventory, 81 percent of the campuses in the Waco region had no campus security system, compared to only four percent in

the El Paso region. Almost half the campuses in the San Antonio region had campus police or security guards, the highest percentage of any region.



(Continued from page 13)

fair, meaning they were slightly deteriorated, with portions of the classroom requiring minor repair or touch-up. Two-thirds of all classrooms were rated good, meaning they require only normal maintenance.

There is a degree of subjectivity in the condition ratings; however, comparisons between groups of districts are representative because they are based on averages of many observations made by different individuals.

Fifty percent of the rooms in the eight largest school districts serving major urban areas were rated good, compared to almost 80 percent of the rooms in their surrounding suburban districts. A higher percentage of classrooms in low property wealth districts are rated poor or below

average compared to high wealth districts. (The charts on page 5 provide additional information by district economic conditions.)

As Chart 15 shows, the condition of classrooms also varies from one geographic region to another. More than 80 percent of classrooms in the Austin region were rated good. This is particularly notable when considering major urban districts as a group had a lower percent of rooms rated good than the state as a whole. The West Texas regions of Lubbock, Midland, and El Paso also had a high percentage of rooms rated good.

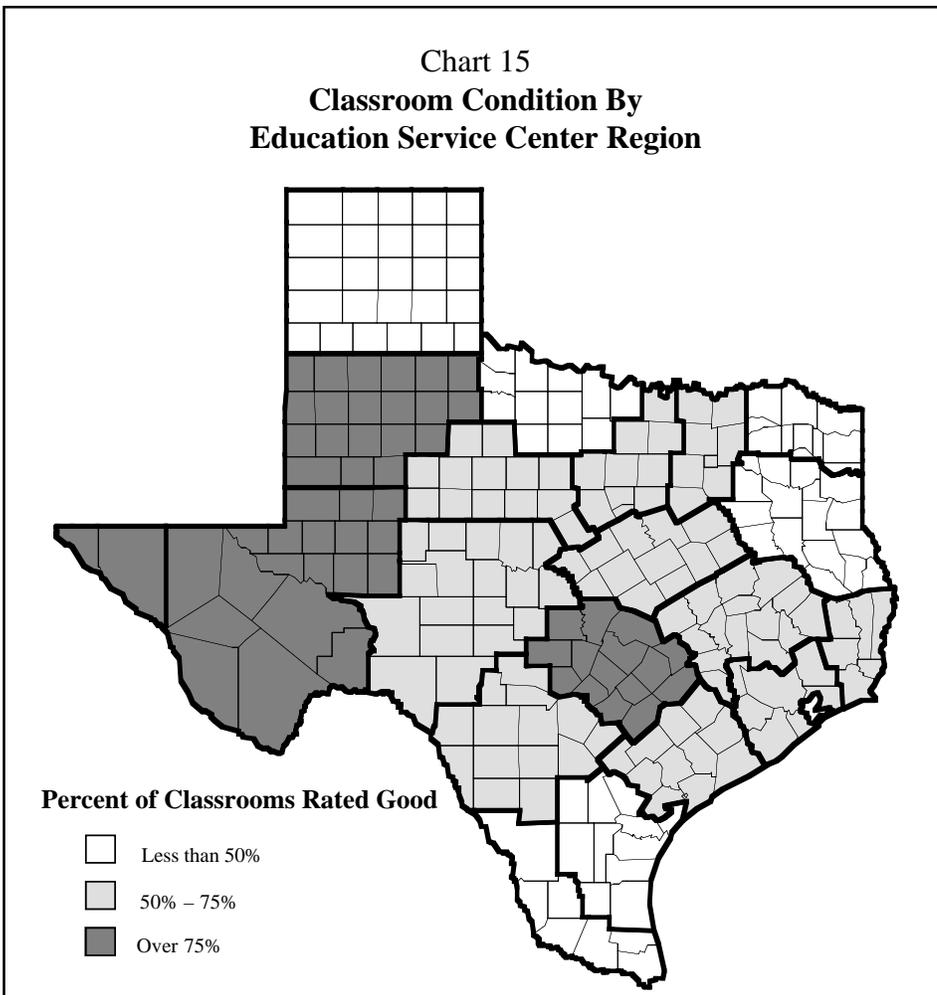
In addition to overall room condition, the lighting condition of classrooms was rated as adequate or inadequate. Adequate lighting is a minimal requirement for using a room

as a classroom, and 98.5 percent of all classrooms were found to have adequate lighting.

The same ratings used for classrooms were used to rate building-wide systems such as heating, cooling, and plumbing — good, fair, below average, and poor. School buildings were more likely to have one of the building-wide systems rated poor than to have classrooms rated in poor condition. Even so, only about seven percent of cooling systems, eight percent of heating systems, and nine percent of plumbing systems were rated poor or below average.

In addition to classrooms and school buildings, school sites were inventoried. One of the items on the school site inventory was availability of an adequate number of parking spaces. More than 80 percent of all campus sites have an adequate number of parking spaces. Almost 95 percent of districts with fast-growing student populations have adequate parking, suggesting that adequate parking may be a characteristic of new school buildings. Only 70 percent of campuses in major urban school districts have adequate parking, compared to 90 percent of the campuses in their surrounding suburbs.

Chart 15
Classroom Condition By
Education Service Center Region



The 1991 inventory of school facilities provides a rating of overall classroom condition for all Texas classrooms. School districts in Central and West Texas have over 75 percent of their classrooms rated in good condition. School districts in the Rio Grande Valley, Panhandle and East Texas find over half of their classrooms rated either fair, below average, or poor.

Violence in the Schools

Violence in a school can affect the work environment of the teacher in three ways. In a 1991 survey by the National Center for Education Statistics (NCES), 99 percent of teachers indicated they feel safe or moderately safe in the school building during school hours. This was true regardless of the grade level or location of the school. These responses suggest that teachers do not fear for their personal safety at work — the most direct effect of school violence. This does not mean that teachers are immune from verbal or physical abuse by students.

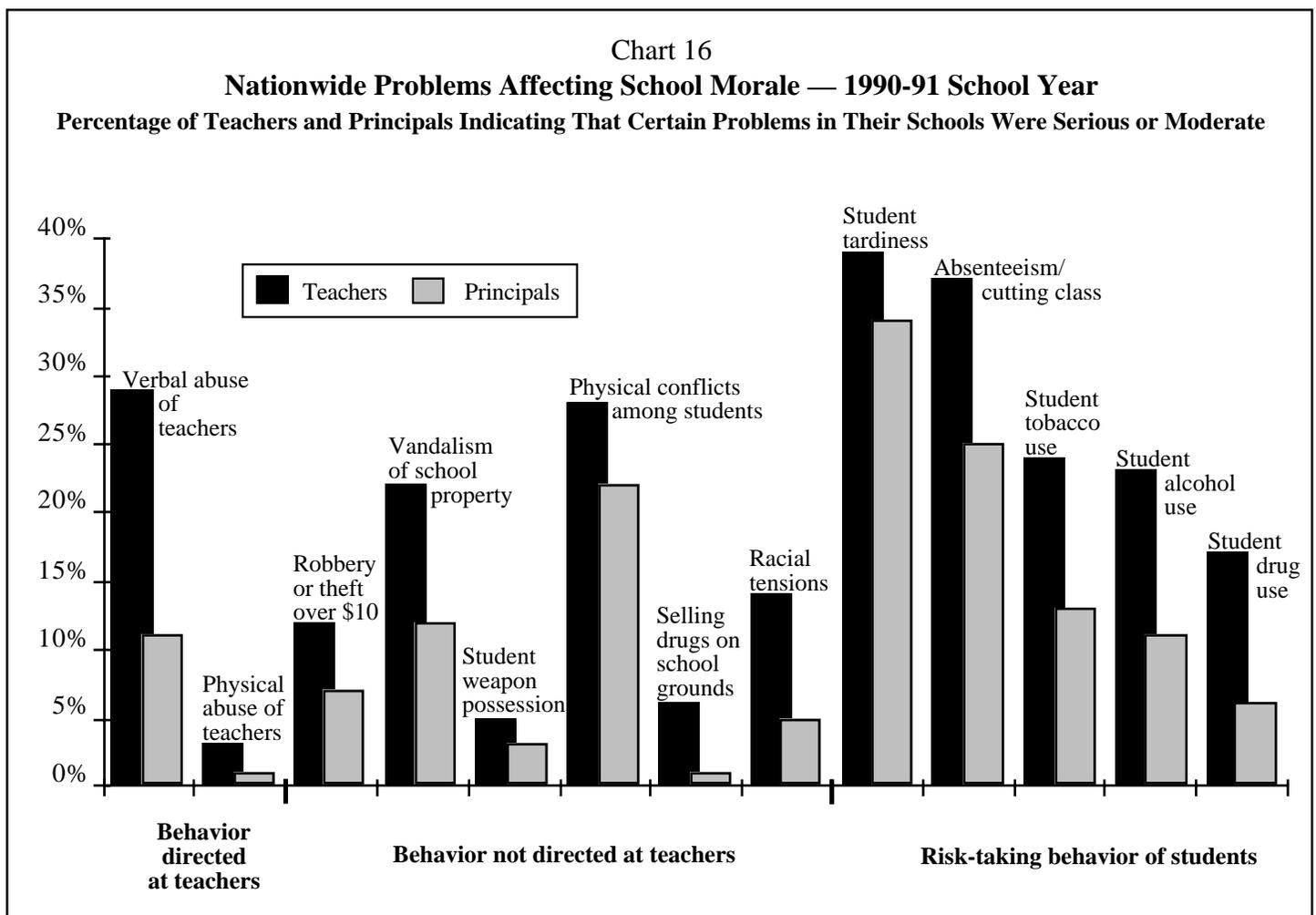
The same survey found that half of all teachers have been verbally abused by students and seven percent have been physically attacked. Although violence toward teachers is slightly more prevalent in urban schools, it exists in schools of all types and grade levels.

Violence also affects a teacher's ability to do his or her job. The NCES survey asked teachers and principals the extent of certain problems in their schools. Chart 16 shows teacher and principal responses. Teachers were more likely than principals to indicate that problems exist in their schools. This may be because teachers are closer to the students than principals

and feel a more immediate impact on their work environment.

A Center for Research on the Context of Secondary Teaching study of the workplace from the point of view of the teacher found that the students are the most important factor in a teacher's classroom effectiveness and the teacher's sense of effectiveness changes class by class depending on his or her relationship with the students in that class.

Forty-four percent of teachers responding to the NCES survey indicated that they have had student misbehavior interfere with their teaching. Thirty-four percent have
(Continued on page 18)



National information from teachers and principals surveyed in 1991 indicates that there are several problems occurring in schools that may have an adverse affect on both the working environment and teaching effectiveness of teachers. Although risk-taking behaviors of students are shown to be prevailing problems, verbal abuse of teachers was considered more serious than either physical conflicts among students, vandalism, or student drug use.

District Type

The type of community in which a school district is located is sometimes a differentiating characteristic. This section groups Texas school districts into four categories based on location — urban, suburban, nonmetropolitan, and rural. Factors such as proximity to a metropolitan area, size, and growth rate are used to determine the appropriate category for each district.

Urban districts include the eight largest school districts that serve the metropolitan areas of Austin, Corpus Christi, Dallas, El Paso, Fort Worth, Houston, and San Antonio; plus major school districts in other large Texas cities. Suburban districts are other school districts in and around metropolitan areas and large cities. Nonmetropolitan districts include other large school districts and school districts with high growth rates. Rural districts are the remaining small school districts.

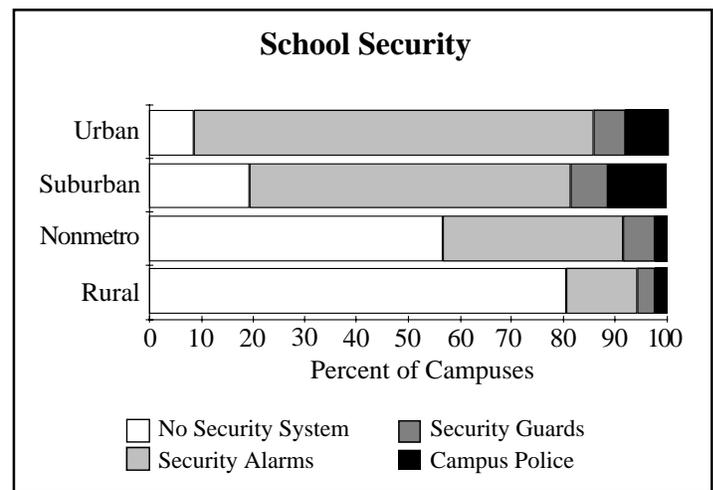
Almost half of all school districts are located in rural areas. Thirty-six percent of districts are in nonmetropolitan areas; the remaining 16 percent are in urban or suburban areas. Although there are 499 rural school districts, they serve only five percent of the total student population. Over 70 percent of all students are taught in the 171 urban and suburban school districts.

Urban school districts have an average teacher salary that is \$4,121 above that of rural districts. Average years of experience among teachers is not the cause for larger salaries in urban areas, since teachers in all categories of districts have near the state average of 11 years of experience.

Nor do differences in operating expenditures explain salary differences. Urban, suburban, and nonmetropolitan areas each have roughly \$4,000 per pupil in operating expenditures. Urban school districts spend the least amount per teacher in consumable supplies.

Rural districts have the highest operating expenditures per pupil despite their low teacher salaries. Rural districts also spend the largest amount per teacher on consumable supplies. This, along with the small number of pupils per teacher, may be a trade-off for lower teacher salaries.

Classrooms get slightly larger in square feet the more urban the school district. However, the increase in size does not keep up with the increase in number of students in the classes. Classrooms in urban districts average 782 square feet, or 36 square feet per student, based on the average class size of 22 students. Classrooms in rural districts average only 717 square feet, but provide 49 square feet per student because of the smaller average class size of 15 students.



Over 80 percent of all rural school districts have no security system. The number of school districts with some security measure increases in more urbanized areas. Urban school districts have more than 75 percent of their campuses secured by alarms, and suburban districts have the greatest number of school sites secured by campus police.

	Districts	Students	Average Teacher Salary	Average Years of Experience	Operating Cost Per Pupil	Supply \$ Per Teacher	Class Size	Sq. Feet Per Student
Urban	3%	33%	30,675	11.8	4,340	762	22	36
Suburban	13%	38%	29,805	10.8	4,043	809	21	36
Nonmetro	36%	24%	27,848	11.6	4,140	855	19	40
Rural	48%	5%	26,554	11.0	5,049	944	15	49

(Continued from page 16)

had serious student disruptive behavior interfere with teaching.

A third way violence can influence a teacher's working conditions is the negative effect on school morale of behavior not directed at teachers. Chart 16 includes six problems that negatively effect school morale for a teacher even if the problems have not resulted in disruption in that teacher's classroom — robbery or theft, vandalism of school property, student possession of weapons, physical conflicts among students, selling drugs on school grounds, and racial tensions.

Many violence prevention strategies in schools are targeted at students who engage in behaviors found to be consistent with violence, such as drug abuse, alcohol consumption, and cigarette smoking. Schools are also turning to technological interventions such as use of metal detectors and to reliance on security police.

The Texas school facility inventory reported that more than half of the state's 6,100 campuses had security alarm systems in 1991. Many school districts, including Dallas ISD and Houston ISD, have hand-held and walk-through metal detectors to provide weapon control in the schools. Nearly 700 campuses, or 13 percent of all Texas campuses, hired either campus police or security guards in 1991. This year Houston ISD made a move that is being considered by large urban districts nationwide when it chose to arm security guards at 80 percent of the middle schools and high schools.

The school safety and violence prevention initiative was established in response to the State Board of Education's concern with violence in the schools. The initiative organized a Roundtable on School Safety and Violence, a multidisciplinary group that advises the TEA on this topic.

Two legislative recommendations of the roundtable were adopted by the board as part of its legislative package. Recommended funding of alternative schools for expelled youth was not provided, although legislation was passed that authorizes the board to establish special purpose schools or school districts for educating students in special situations whose educational needs are not adequately met by regular school districts.

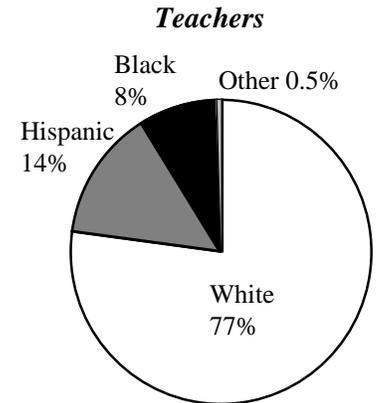
Recommended legislation authorizing sharing of certain types of information between law enforcement agencies and schools did pass. Other activities of the initiative include collecting information regarding the incidence of violence in Texas schools, identifying resource materials related to violence prevention, providing technical assistance to school districts, and developing training materials.

Competing Occupations and Teaching Pools

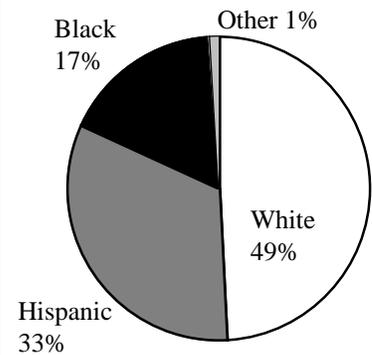
Although competing occupations attract teachers away from the teaching profession, an increasing number of individuals are pursuing teaching as a second career. Texas alternative certification programs have grown in number since their conception in 1985 and were the source of ten percent of the examinees seeking initial certification in Texas in 1992.

Alternative certification programs are designed to attract individuals to the teaching profession who have at least a bachelor's degree in a field other than education. The programs have also succeeded in attracting minorities and males to the teaching profession. The 1992-93 Texas alternative certification program interns are 51 percent minority and 34 percent male. In addition, current teachers can obtain additional certificates or endorsements through these programs.

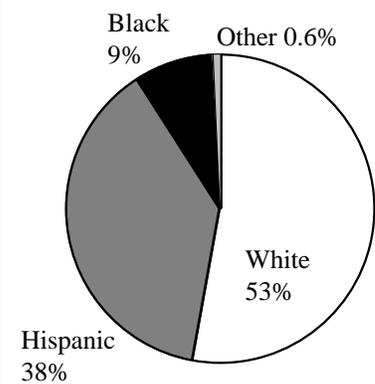
Chart 17
**Ethnicity of the Teaching Force
1992-93 School Year**



Alternative Certification Interns



**Educational Aides
Advanced to Teaching**



Educational aides are another potential pool of minority teachers. Hispanics make up 38 percent of educational aides who have advanced to teaching positions and 33 percent of alternative certification interns, while only 14 percent of all teachers are Hispanic.

The 1992 NCEI survey of individuals interested in alternative teacher certification identified individuals by current occupation. Business and clerical occupations were each the source of 18 percent of inquiries, and marketing and sales accounted for 12 percent. Ten percent of the inquiries were from counselors. Military personnel were the source of 26 percent of inquiries — the largest group outside current teachers seeking additional certification.

By 1995 the U.S. Department of Defense plans to cut military spending 23 percent from 1990 levels. The Texas Task Force on Economic Transition estimates that the state will lose approximately 63,000 defense-related jobs by 1997. This reduction in the size of the military may expand the labor pool of military personnel, and technical and professional staff from defense-related industries, available for teaching. The Texas military initiative was implemented in 1992 to create a network for recruiting military personnel to teaching through the alternative certification programs. Past recruitment of military personnel into teaching has been informal and attracted a small percentage of individuals within the state. The Texas military initiative will formalize the recruitment effort.

The initiative focuses on collaborations between Texas army posts and adjacent alternative teacher certification programs. In March 1992 Governor Ann Richards signed a letter of intent with the U.S. Secretary of Education and U.S. Secretary of the Army to make Texas a pilot state for recruitment of military personnel into teaching.

The Region XII education service center (ESC) in Waco, Region XX ESC in San Antonio, and University of Texas at El Paso alternative certification programs are working closely with the Fort Hood, Fort Sam Houston, and Fort Bliss army posts to

assist military personnel interested in the transition to teaching. The army installations receive funding from the U.S. Department of the Army to support this effort, and a military liaison has been assigned to the Texas Education Agency. The Texas military initiative, through the Careers for Army Personnel in Schools (CAPS), also provides employment assistance in public service for former service numbers.

Paraprofessional Advancement

Advancement into the teaching profession by paraprofessionals can be measured by tracking educational aides advancing to teaching positions. In Texas, 1,122 teachers employed during the 1992-93 school year were employed as educational aides between 1988-89 and 1991-92. This represents less than one percent of the total 1992-93 teaching staff.

Fifty-seven percent of this group teach in school districts offering higher than average teacher salaries, yet generally with lower than average school district wealth. Nearly 90 percent were working toward college degrees while employed as educational aides and completed the degrees before promotion to teaching positions. Thirty-one percent are employed in districts other than the ones in which they were employed as educational aides. The former aides are 83 percent female and 47 percent minority. As Chart 17 illustrates, educational aides may be an untapped source of potential minority teachers.

Conclusion

This paper provides a cross-section of one aspect of teacher supply: the prevailing condition of the teaching profession. This assessment of teacher working conditions includes a review of the teaching workplace, the workday, the work load, and the work atmosphere.

The variation in Texas teacher salaries is discussed in regard to teacher experience and subject taught, as well as school district characteristics, to provide insight to the administrative response to the need to maintain teacher salary levels during times of fiscal constraint.

Room size and condition plus school site information offer a profile of the workplace teachers encounter daily. District budget information provides comparisons of supplies available to teachers.

The workday of the teacher is measured based on class schedules, employment contract lengths, and class sizes.

School violence is also discussed. Very little data have been collected on actual incidents or long-term effects of school violence. This paper provides some information on current policy trends in the area of school safety and national data on teacher perceptions of this problem.

Taken together, each of the topics reviewed contributes to the understanding of the teaching profession as an occupation, and along with that, the personal decisions of prospective teachers in choosing to pursue the profession. Two sources of potential teachers were also discussed. Paraprofessionals and participants in the alternative certification programs were profiled to highlight the characteristics of these particular entrants to the teaching profession.

Salaries, facilities, supplies, and class schedules provide the infrastructure of the teacher's workplace. Overlaying all of this is the primary element of a teacher's working conditions — the students. The dramatization on the following page illustrates the workday of a typical Texas teacher.

Workday of a Typical Texas Teacher

At the stoplight you glance in the rearview mirror. Your eyes feel swollen and red after another long evening at the kitchen table with a pot of coffee and a stack of 11th-grade English papers. But you promised the kids you'd have their papers graded by Wednesday; you want them to trust something. The pickup behind you is honking.

The radio says it's going to hit 95° today. It's not even June. Wanda the '76 hatchback wheezes pitifully when you reach for the air conditioner. But who can afford a new car? Eleven years of teaching and it's still a struggle. Some of your friends have left the classroom for higher paying jobs. Others, like Beth and John, have had to take second jobs for the summer. You hope it hasn't come to that. The summer break gives you a chance to spend time with your own children.

Turning into the parking lot, you see Mary Ford and her friend Stewart slip over to the apartment complex across the street for a smoke (which makes you think of your oldest daughter Molly and the inevitable allure of teen peer pressure). You wonder if either of them will make it to class today. Wouldn't be the first time they skipped. Somehow the front office doesn't see these things happening like teachers do. At last week's faculty meeting, Principal Mackey passed around an impressive chart that showed how, since February when the school hired a full-time security officer, everything from racial tension to absenteeism had declined most dramatically. Maybe. You wave over the rows of parked cars at Officer Birney. Across the street, Mary and Stewart have disappeared.

At the front door you are sucked in by the flurry of last-minute activity. In truth, it is a familiar morning ritual, one you have come to enjoy almost. The push and shove of youthful exuberance — self-conscious, preening; the locker gossip of confidence and confession, of howling conquest and weepy misfortune. It radiates through the hallways brash, defiant, and urgent. Balanced under your arm is a box of used paperbacks you bought for the students last weekend at a garage sale. You weave precariously through the crowd, exchange quick greetings with some of the students as they pass.

From behind your desk you wait for the last of the stragglers to settle in sheepishly (you reserved a couple of chairs in the front row just for the late arrivals). Enough time, you trust, to let the gush of 20 inspired voices dissipate and for everyone to begin to cool off. Roosevelt High, unlike your poor car, actually is aging rather gracefully. A few wrinkles have set in over the years — a sprung door hinge or two, the occasional backed-up toilet — minor inconveniences mostly. All in all, the school is quite comfortable.

Audible groans and silent smiles gauge the level of approval as, one by one, you hand back the students' essays. A couple of the more obviously disaffected mutter sweet nothings in your general direction when you walk by. You silence them with a stern glance and move on. Several years ago these profane offerings might have surprised you, might have left you feeling angry and hurt, vulnerable. Not anymore. You reserved the computer lab to spend the rest of the period editing and rewriting, trying to elucidate the subtle charm of Shakespearean verse.

After six classes and 125 returned compositions, you sense your popularity may have suffered a fatal blow. Even your 2:30 conference with Eddie's parents ended on a sour note. "Why does he need to write about all this old stuff, anyway?" questioned Mr. Gilbert, finally; "Eddie's going to play football in college."

"But suppose Eddie breaks an arm or something, Mr. Gilbert. What if he can't play football?" The words leapt from your mouth without warning. "Don't you think it would be nice if he could still read and write properly?" At which point Mrs. Gilbert promptly burst into tears.

As you pull out of the parking lot seven hours after turning in, you see Mary Ford walking alone in front of the apartment complex. She never made it to fourth period English. You stop and offer her a ride home. "No thanks, Ms. James." A friend of hers is meeting her there soon, she says. You linger a few seconds before pulling away, wishing she would change her mind. She doesn't. Driving home, it starts to rain, and you think about Molly and little Kate and how you can't wait to see them.

Student Performance

The Texas Assessment of Academic Skills (TAAS) testing program is administered to students in grades 3, 5, 7, 9, and 11. This testing program, as the name implies, emphasizes the assessment of academic skills rather than minimum skills, and focuses on students' higher order thinking and problem-solving skills. The TAAS is a criterion-referenced test that relates test items to specific learning objectives drawn from the essential elements adopted by the State Board of Education. The passing rates for these tests are calculated using the passing standard of 70 for all grades.

Districts are grouped into five TAAS categories with percent of students passing ranging from under 37 percent to over 57 percent. Percent passing all tests taken is the number of students who passed all sections of the 1991-92 administration of the TAAS, taken as a percentage of the total number of students tested. These percentages exclude special education students and third grade tests taken in Spanish.

School districts with under 37 percent of their students passing all tests taken have the highest average teacher salaries in 1992-93, compared to all other categories of districts. The salary level offered to teachers in the low-performing districts may be a trade-off for other drawbacks found in these districts.

In 1992-93, districts with under 37 percent of their students passing all tests taken have more pupils per teacher. This results in one more pupil in each class, on average, than districts in other categories. Although there are more students per teacher, the low-performing districts spend the least amount of money per teacher on low cost supplies.

The number of computers per teacher consistently increases with each category of districts. The 1991 facilities inventory found 40 percent more computers per teacher in the highest performing districts than in the lowest performing districts.

The differences in facilities condition between the low-performing and high-performing districts are striking. The average size of classrooms does not vary between categories of districts. However, 49 percent of classrooms in low-performing districts rated good and almost five percent rated poor or below average. More rooms are rated good and fewer are rated poor or below average in each successive performance category of districts.

Eighty percent of campuses in the lowest performing districts had some form of security system at the time of the 1991 facilities inventory, the greatest percentage of all groups. Sixty percent had security alarms and almost 20 percent had campus police or security guards.

TAAS: Percent Passing All Tests Taken				
Number of Districts		Average Teacher Salary	Students per Teacher	Average Class Size
220	Under 37%	\$30,259	16.3	21
201	37% - 44%	\$28,680	15.6	20
231	44% - 50%	\$28,433	15.5	20
202	50% - 57%	\$29,132	15.6	20
194	Over 57%	\$29,865	15.5	20
		Supply \$ per Teacher	Computers per Teacher	Room Size (Sq. Ft.)
220	Under 37%	\$826	1.0	764
201	37% - 44%	\$845	1.1	761
231	44% - 50%	\$836	1.2	773
202	50% - 57%	\$874	1.3	766
194	Over 57%	\$836	1.4	771
		Percent of Classrooms Rated Poor or Below Avg.	Fair	Good
220	Under 37%	4.8	46.0	49.1
201	37% - 44%	3.0	38.3	58.6
231	44% - 50%	2.6	33.1	64.3
202	50% - 57%	1.8	25.0	73.0
194	Over 57%	1.2	19.7	79.1
		% With No Campus Security	% With Security Alarms	% With Police & Guards
220	Under 37%	20.6	60.1	19.2
201	37% - 44%	41.2	48.9	9.9
231	44% - 50%	39.0	52.5	8.6
202	50% - 57%	42.8	44.2	13.0
194	Over 57%	40.8	50.0	9.3

Selected Bibliography

Association of Texas Professional Educators. (1992) *1992 ATPE Biennial Survey*. Austin, TX: ATPE.

Bobbitt, Sharon A. (1990) "Moonlighting Among Public and Private School Teachers." Paper presented at the annual meeting of the American Educational Research Association, April 17, 1990. The results presented in this paper are from the NCES Schools and Staffing Survey.

Bobbitt, Sharon A. and Whitener, Summer D. (1992) "Why do Teachers Leave Teaching?: Reasons for Teacher Attrition from the Teacher Follow-up Survey" Paper presented at the annual meeting of the American Educational Research Association, April 24, 1992.

Boe, Erling E. and Gilford, Dorothy M., eds. (1992) *Teacher Supply, Demand, and Quality: Policy Issues, Models, and Data Bases*. Washington, DC: National Academy Press.

Bushweller, Kevin. (1993) "Guards with Guns." *American School Board Journal* (January 1993): 34-37.

Cohen, Stu and Wilson-Brewer, Rene. (1991) "Violence Prevention for Young Adolescents: The State of the Art of Program Evaluation." Paper presented at the July 1990 conference Violence Prevention for Young Adolescents; supported by Carnegie Corporation of New York in Washington, DC.

Darling-Hammond, L. and Berry B. (1988) *The Evolution of Teacher Policy*. Joint Report, JRE-01. Center for Policy Research in Education.

Feistritzer, C. Emily. (1992) *Who Wants to Teach?* Washington, DC: National Center for Education Information.

Furby, Lita and Beyth-Marom, Ruth. (1990) *Risk-Taking in Adolescence: A Decision-Making Perspective*. Working Paper for the Carnegie Council on Adolescent Development. Washington, DC: Carnegie Corporation of New York.

Governor's Task Force on Economic Transition. (1993) *Defense Transition: Economic Promise for Texas*. Austin, TX: Governor's Task Force on Economic Transition.

Kiser, Don and Turner, Terry. (1993) "Defense Wings Clipped." *Fiscal Notes* (Texas Comptroller of Public Accounts, Austin, TX) 93:2 (February 1993): 1, 3-6.

McLaughlin, Milbrey Wallin. (1992) *What Matters Most in Teachers' Workplace Context?* Stanford, CA: Center for Research on the Context of Secondary Teaching.

National Center for Education Statistics. (1993) *Occupational and Educational Outcomes of Recent College Graduates 1 Year After Graduation: 1991*. Statistical Analysis Report. Washington, DC: U.S. Department of Education. Office of Educational Research and Improvement.

National Center for Education Statistics. (1992) *Public School Principal Survey on Safe, Disciplined, and Drug-Free Schools*. Washington, DC: U.S. Department of Education. Office of Educational Research and Improvement.

National Center for Education Statistics. (1991) *Teacher Survey on Safe, Disciplined, and Drug-Free Schools*. Washington, DC: U.S. Department of Education. Office of Educational Research and Improvement.

National Education Association. (1983-1992) *Rankings of the States, 1983-1992* (Annual). Washington, DC: NEA Research Division.

Nelson, F. Howard. (1992) *Survey & Analysis of Salary Trends 1992*. Washington, DC: American Federation of Teachers.

State Board of Education. (January 1993) "Administrative Costs Reports." *Agenda, January 8-9, 1993*. Austin, TX: Texas Education Agency.

State Board of Education. (February 1993) "Joint Meeting of the Texas Juvenile Probation Commission and State Board of Education." *Minutes, February 11-12, 1993*. Austin, TX: Texas Education Agency.

State Board of Education. (February 1993) "Status Report on School Safety and Violence Prevention in the Schools." *Agenda, February 11-12, 1993*. Austin, TX: Texas Education Agency.

State Board of Education. (June 1993) "Legislative Update." *Agenda, June 10-11, 1993*. Austin, TX: Texas Education Agency.

Texas Administrative Code. Title 19, Part II, Texas Education Agency. (1993) Austin, TX.

Texas Education Agency. (1991,1993) *Alternative Teacher Certification in Texas, 1991-1992; 1992-1993*. Austin, TX: TEA.

Texas Education Agency. (1992) *ExCET 1991-92 Report*. Austin, TX: TEA.

Texas Education Agency. (1992) *Financial Accounting Manual*. Bulletin 679. 9th edition. Austin, TX: TEA.

Texas Education Agency. (1992) "Report on School Facilities." Unpublished manuscript prepared by the Division of Resource Planning.

Texas Education Agency. (1992,1993) *Snapshot: School District Profiles, 1990-91; 1991-92*. Austin, TX: TEA.

Texas Education Code. (1992) Austin, TX.

Texas House of Representatives. Committee on Criminal Jurisprudence. (1992) *Interim Report to the 73rd Texas Legislature*. Austin, TX.

Texas State Teachers Association. (1993) *Salary and Health Insurance Data 1992-93*. Research Bulletin. Austin, TX: TSTA.

U.S. Department of Labor. Bureau of Labor Statistics. (1992) *Occupational Compensation Survey: Pay and Benefits. Houston, Texas, Metropolitan Area, March 1992*. Bulletin 3065-17. Washington, DC: U.S. Government Printing Office.

U.S. Department of Labor. Bureau of Labor Statistics. (1992) *Occupational Compensation Survey: Pay Only. San Antonio, Texas, Metropolitan Area, July 1992*. Bulletin 3065-26. Washington, DC: U.S. Government Printing Office.

U.S. Department of Labor. Bureau of Labor Statistics. (1992) *Occupational Compensation Survey: Pay and Benefits. Longview-Marshall, Texas, Metropolitan Area, June 1992*. Bulletin 3065-33. Washington, DC: U.S. Government Printing Office.

U.S. Department of Labor. Bureau of Labor Statistics. (1992) *Occupational Compensation Survey: Pay Only. Abilene, Texas, Metropolitan Area, May 1992*. Bulletin 3065-15. Washington, DC: U.S. Government Printing Office.

U.S. Department of Labor. Bureau of Labor Statistics. (1992) *Occupational Compensation Survey: Pay and Benefits. Dallas, Texas, Metropolitan Area, December 1991*. Bulletin 3060-61. Washington, DC: U.S. Government Printing Office.

Project Staff

Linda Cimusz
Administrator for Professional Development
and Policy Planning

Criss Cloudt
Coordinator
Policy Planning and Evaluation Division

Nancy Stevens
Editor

Teacher Supply, Demand, and Quality Policy Research Project

Policy Planning and Evaluation
Ester Calderón, Project Coordinator
Linda Hargrove
Richard Kallus
Vicky A. Killgore
Lauren H. Moede
Marilyn H. Rumbaut
Maureen Moore Scheevel

Professional Educator Assessment
Omar S. López
Pamela Tackett
Nolan Wood

Resource Planning and Reports
Bob Barker

Educational Personnel Records
George C. Dugger

Professional Educator Preparation
William M. Wale

PUBLICATION ORDER FORM

Purchaser Name _____ Date _____

Send to (name, if different) _____

Address _____

City _____ State _____ Zip _____

To place an order for a publication, fill out information below and make check or money order payable to:
Texas Education Agency
Price includes postage, handling, and state tax.

Publication Number	Title of Publication	Quantity	Price Per Copy	Total Price
GE3 410 11	Working Conditions of Texas Teachers	_____	\$1.00	_____

For Tax Exempt Orders Only

To place an order for a publication, fill out information below and make check or money order payable to:
Texas Education Agency
Price includes postage and handling.

Publication Number	Title of Publication	Quantity	Price Per Copy	Total Price
GE3 410 11	Working Conditions of Texas Teachers	_____	\$1.00	_____

FOR PUBLICATION INQUIRIES AND PURCHASE ORDERS*, SEND TO:

Texas Education Agency
Publications Distribution
1701 North Congress Avenue
Austin, Texas 78701-1494

**Purchase orders are accepted only from Texas educational institutions and government agencies.*

IF YOU ARE MAILING A CHECK OR MONEY ORDER, REMIT THIS FORM WITH PAYMENT TO :

Texas Education Agency
Publications Distribution
P. O. Box 13817
Austin, Texas 78711-3817

Make check or money order payable to:
Texas Education Agency