Educator Supply and Demand

Illinois State Board of Education
Research Division

December 2000

FOREWORD

The Illinois State Board of Education respectfully submits this report to the Governor, the General Assembly, and institutions of higher education in fulfillment of the requirements of Section 2-3.11C of the School Code [105 ILCS 5/2-3.11c]. This report addresses the relative supply and demand for education staff of Illinois public schools.

Specifically, this report provides information on:

1. the relative supply and demand for teachers, administrators, and other certificated and non-certificated personnel by field, content area, and levels;

2. state and regional analyses of fields, content areas, and levels with an over/under supply of educators; and

3. projections of likely high/low demand for educators in a manner sufficient to advise the public, individuals, and institutions regarding career opportunities in education.

Additional information is provided on workforce composition, retirement projections for educators, and attrition rates.

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Executive Summary

As educators of the baby-boomer generation look toward retirement, their children, the boomlets, are still coming through the school system as students. In recent years, the demand for educators has increased, and it is expected to continue increasing. Meanwhile, there is no promise of a corresponding increase in the supply. A strong economy with low unemployment rates further upsets the precarious supply-demand balance of educators. This report examines the various aspects of Illinois educators, including educator supply and demand, for school year 2000. Following are the significant findings of the report prepared pursuant to Section 2-3.11c of the Illinois School Code.

I. What is the composition of the current teaching and administrative staff?

In school year 2000, there were about 145,000 full-time and over 5,000 part-time educators in Illinois public schools. The following characteristics of Illinois educators are based on the full-time teaching and administrative staff:

The Illinois public school system is served by an aging staff. The average age of teachers was 44 years and nearly 40% were at least 50 years old. On average, principals were 50 years old and superintendents were 53 years old. Sixty percent of the principals and 80% of superintendents were at least 50 years old.

Females dominated the teaching force while males dominated district leadership positions. There were three female teachers (76%) for every male teacher while nearly 88% of the superintendents were male. Among principals, 53% were male.

Minorities (including Black, Hispanic, Asian/Pacific Islander, and Native American) were under-represented among educators. Minority teachers formed 15% of the teaching force compared to a minority student population of 39%. Minorities formed 19% of the principals in Illinois public schools and only 3% of the superintendents.

Illinois educators have high levels of education. Fifty-three percent of the teachers held bachelor's degrees, and 47% had degrees at the master's level or higher. All administrators possessed at least a master's degree; 12% of the principals and 67% of the superintendents held doctorates or other advanced degrees.

II. What is the relative supply of educators?

Supply includes all educational personnel available to the schools. Indicators of supply include: (1) personnel retained from the previous year; (2) newly certificated individuals; (3) re-entering personnel, i.e., newly hired educators who had prior experience; and (4) individuals currently enrolled in professional preparation programs. Other supply-related issues include substitute teachers, educator quality, and retention initiatives.

(1) The largest supply of educators is the previous year's workforce; nearly 130,000 or 88% of the previous year's total workforce was employed in school year 2000. The retention rate for all administrators was 87%, while the retention rate for teachers was 90%.

(2) The second largest source of supply is newly certified or "first-time" teachers. More than 13,000 new teachers were certified in school year 1999. In school year 2000, 6,655 first-time teachers were hired by Illinois public schools from the 13,000 new teachers.

Between school year 1997 and school year 2000, the number of first-time teachers hired increased considerably, from 4,671 to 6,655. In the same four-year period, the ratio of the number of individuals certified, to first-time teachers hired, declined from 2.8:1 to 2.0:1.

(3) The third major source of supply includes educators returning to the profession; 5,363 educators re-entered the public school system in school year 2000. They are educators who returned after having left education for at least one year.

(4) There were nearly 20,000 undergraduate and over 3,000 graduate students enrolled full-time in Illinois professional preparation programs in 1999.

Substitute Teachers: School districts are finding it increasingly harder to hire substitute teachers as many former substitute teachers have found permanent teaching positions. However, between school years 1999 and 2000, there was a 16% increase in the number of newly certified substitutes which should alleviate some of the difficulties of hiring substitutes.

Teacher Quality: The U.S. Department of Education Schools and Staffing Surveys found that out-of-field teaching is a common problem nationwide. In Illinois, the proportion of public high school teachers who did not have either a college major or minor for subjects they taught were: mathematics, 22%; English, 18%; science 22%; and social studies, 26%.

Retention Initiatives: In spite of the high attrition rate among beginning educators, only about 500 Illinois public school districts reported having mentoring/induction programs to help new educators as they begin their careers.

III. What is the relative demand for educators?

Demand refers to the need for educational personnel to fill vacant positions. Factors affecting demand include: (1) changes in student enrollments; (2) workforce growth; (3) the number of new teachers and administrators hired; (4) the number of educators eligible to retire; and (5) attrition rates (i.e., the rate at which educators leave the profession).

(1) Illinois public school enrollments have been increasing since 1990 and that trend is expected to continue through 2008. This increase will be especially apparent at the secondary level (16% increase or 87,256 students). At the elementary level, the enrollment will grow slightly through 2003 (2% or 32,028 students) and then begin to decline. As the number of students in the Illinois public school system increases, so will the demand for educators.

(2) The educator workforce is growing at a much faster rate than student enrollments. Between 1999 and 2000, the ranks of teachers grew by 3,300, or 2.6% and the number of administrators rose by 215, or 2.7%. In the same period, student enrollments only increased 1%.

(3) In school year 2000, 11,352 new teachers (either first-time teachers or those re-entering the profession) were hired while 2,060 teaching positions went unfilled. In that same period, 180 new administrators were hired while 73 administrative positions went unfilled.

(4) Currently, 24,436 or 17% of the educator workforce is eligible to retire (i.e., 55 years old with 20 years or more of experience) including 15% of teachers, 24% of both administrators and school service personnel, and 27% of other certified staff.

- Due to the age and experience levels of the current workforce, the percentage of teachers eligible to retire will increase substantially in the next three years (40%). The percentage of administrators eligible to retire is expected to be even higher (47%).

- There were 19,237 teachers eligible to retire in 2000. The areas with the largest number eligible to retire were: Self-Contained Classroom (7,201), Special Education (2,262), English Language Arts (1,670), Science (999), and Social Science (983).

- The administrative positions most likely to be adversely affected by retirement are Principals and District Superintendents.

(5) The rates at which educators left the profession (attrition) were relatively low in 2000 – about 5% for administrators and 7% for teachers. But the attrition rates were considerably higher for first-year educators – nearly 19% for administrators and 11% for teachers, underscoring the importance of mentoring programs.

- Despite the relatively large number of administrators eligible to retire (n=2,023), only 426 full-time administrators left education in 2000. However, based on current experience levels and attrition rates, that number is projected to increase 50%? to 640? by 2003.

- In contrast, 7,859 full-time teachers left education in 2000, and that number is expected to rise by 11% to 8,688, in 2003.

- Historically, less than one-fourth of attrition is attributed to retirement.

IV. Which areas have an under-supply of educators?

In recent years, demand for educators has increased while supply has remained relatively unchanged. To assess the extent to which there is any shortage and to identify shortage areas, two indicators are considered: (1) unfilled positions, and (2) a comparison of new supply and new demand.

(1) Each year, many Illinois districts are unable to fill positions for various reasons, including the lack of qualified applicants at the district level. In September 2000, there were 2,637 unfilled positions reported. They included 1,308 unfilled positions in the City of Chicago School District #299, 761 unfilled positions in the suburban districts (Cook County and the collar counties), and 568 unfilled positions in the remaining districts.

Most unfilled positions were for: teachers in self-contained classrooms (453), mathematics (112), physical education (103), science (100), music (97), and most areas of special education including cross categorical (239), learning disabled (154), and speech and language impaired (95). Other educators included guidance counselors (111), and librarian/media specialists (102). Finally, there were 17 elementary principal and 14 secondary principal positions unfilled.

(2) When new supply (number certified in 1999) and new demand (new hires plus unfilled positions in 2000) are compared, areas of educator shortage include the following:

Extreme Shortage	Shortage
Physically Handicapped Health Occupations Library/Media Speech and Language Impaired Blind and Partially Seeing	Deaf and Hard Of Hearing Earth Science Psychologist Special Education (All) Biology Guidance Counselors Physical Education Learning Disabilities Social Worker Industrial Occupations Mathematics Self-Contained Elementary Fine Arts TMH Nurse Science (All subjects) General Science Behavior Disordered Bilingual Principals/Superintendents

For many positions (assignments), the new supply for educators exceeds new demand by the public schools. Yet there is a shortage for educators in many such positions (assignments) mainly because of the competition from private schools, schools out of state, and the business/private sector for individuals trained as teachers.

V. What are the projected areas of high demand in Illinois?

It is projected that between about 56,000 and 72,600 positions will need to be filled over the next three school years.

If high-demand for specific positions is defined as those positions requiring more than a 65% increase over current staffing levels, the likely high demand areas would include: Reading Improvement, Bilingual, Cross Categorical, Computer Education/technology, Title I, At-Risk, English as a Second Language, Behavior Disordered, Gifted, and Learning Resource.

Recommendations

Based on the findings of this report, the following are recommended:

Increase Supply: Consider various strategies to increase the supply of educators in areas of short supply, including the following:

- Increase the number and variety of alternate routes to certification or double the number of graduates from existing alternative programs by 2003, especially for educators in shortage areas.

- Collaborate with other agencies and institutions to increase scholarships for students to become educators in shortage areas.

- Propose legislation that would provide tax rebates for those becoming educators in shortage areas.

- Develop local grow-your-own-educator programs to increase the supply of educators.

Recruitment: Continue to monitor the relative supply and demand of educators to determine the areas of need, now and in the future. Develop various strategies to recruit educators, including the following:

- Provide incentives, such as signing bonuses or housing benefits, to attract individuals from the "reserve pool" of educators.

- Develop strategies and provide incentives to recruit educators from other states and countries.

- Collaborate with school districts and higher education institutions to increase the proportion of male and minority teachers, and female and minority administrators.

- Establish a state-wide clearinghouse requiring the reporting of all vacancies and provide resources to disseminate information on staffing needs.

Retention: Consider various strategies to reduce the attrition rate by 50% for beginning educators by 2003:

- Since many educators leave in the first few years of service, it is imperative there be effective mentoring/induction programs in all schools. The Illinois State Board of Education is in the process of seeking legislative support and funding for such programs.

- Improve the work environment of educators, for example making classrooms less stressful and giving teachers more support.

- Collaborate with other education agencies and associations to enhance the status of teaching as a profession. A closer examination of teacher salaries relative to the salaries of other professions may be a good initial step.

Substitute Teachers: Conduct annual surveys to examine the degree to which school districts are experiencing difficulties in hiring substitute teachers. Investigate strategies, including the following, to alleviate the problem:

- Propose legislation to allow substitutes to work beyond the current 90-day limit in any one district.
- Allow retired educators to work as substitutes beyond the 100-day (400-hour) limit without the loss of retirement benefits.
- Increase the current levels of remuneration for substitute teachers.
- Provide training at regional centers for substitute teachers who do not have the traditional credentials to enhance their classroom skills.

Educator Quality: Obtain the services of a reputable contractor to assess educator quality, including the degree of out-of-field teaching, in Illinois public schools. The resulting unbiased data may be used to identify: (1) corrective measures for educators, if any, and (2) programs for professional development with the ultimate goal of having a "stable and sufficient corps of highly-qualified teachers and other school personnel" in all schools.

Data Warehouse: Continue to provide support and resources for the development of a data warehouse system to house data from various agencies, including higher education institutions (on the preparation of educators) and the Illinois State Board of Education (on the certification and service record of educators). A warehouse system should enhance data retrieval and analysis. It provides a more complete supply-demand picture of the K-16 system, linking higher education to K-12 needs.

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I. Workforce Composition

This chapter provides contextual information in terms of profiles of full-time teachers, principals, and superintendents employed in Illinois public schools in school year 2000. Included are all full-time elementary, secondary, and special education teachers. Only school principals and district superintendents listed as full-time employees in the Teacher Service Record are included in this narrative. Excluded are part-time teachers and administrators who are designated as assistants, associates, or deputies.

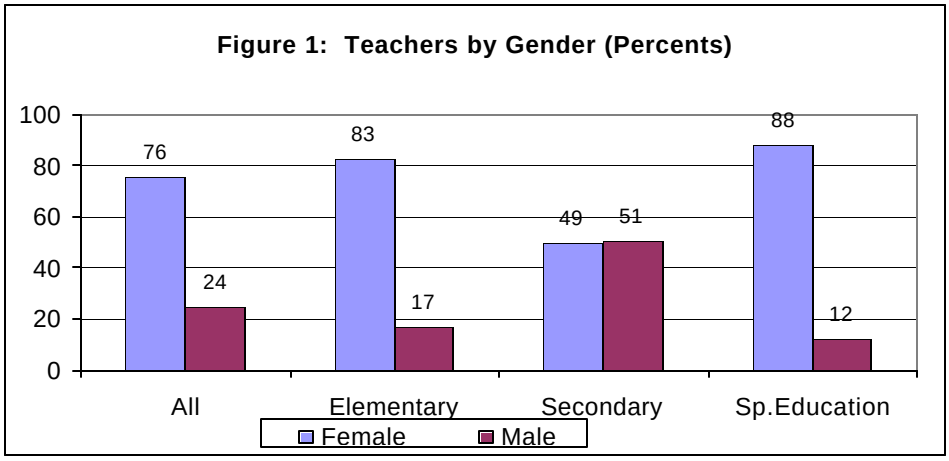
Classroom Teachers

Number of Teachers

In school year 2000, Illinois public school students were taught by 124,279 full-time teachers. Included in this number were 73,530 elementary teachers (including junior high), 30,110 secondary teachers, and 20,639 special education teachers.

Gender of Teachers

Overall, there were three female teachers (76%) for every one male teacher (24%). However, the degree to which females dominated the teaching profession varied by level or teaching assignment as shown in **Figure 1**. There were nearly five females for every male among elementary teachers and about seven females for every one male special education teacher. The gender ratio was more balanced among secondary teachers, close to one female for every male.



Age of Teachers

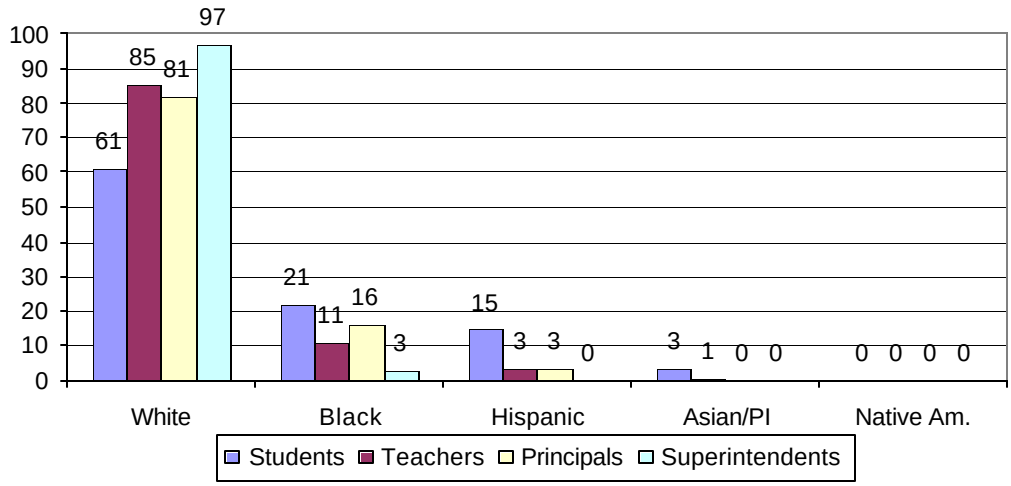
On average, teachers in Illinois public schools were 44 years old. As illustrated below, nearly two out of every five teachers (37%) were at least 50 years old. This may have implications in terms of the need for teachers to replace those who will be retiring in the near future. In school year 2000, the age distribution for teachers was:

Less than 30 years old	15%
30-39 years old	21%
40-49 years old	27%
50 years or older	37%

Race/Ethnicity of Teachers

Collectively, minority (including Black, Hispanic, Asian/Pacific Islander, and Native American) teachers form 15% of the teaching force compared to a minority student population of 39%. The racial/ethnic distribution is shown in **Figure 2**. Some educators consider it important for the teacher racial-ethnic distribution to reflect the student racial-ethnic distribution in order to provide role models for the students. Availability of minority teacher candidates is an important factor affecting the racial-ethnic ratios between teachers and students. Another factor may be the organization of the education system in terms of districts and schools; it is not always possible to hire staff to reflect the exact proportions of minority students.

Figure 2: Racial-Ethnic Distribution (Percents)



Education of Teachers

Almost every teacher in the Illinois public school system possessed at least a bachelor's degree. While 53% of the teachers held bachelor's degrees, 47% had degrees at the master's level or higher. A very small proportion of the teaching force (0.2%) did not have college degrees; examples of teachers without degrees include vocational education instructors holding provisional certificates.

School and District Administrators

Number of Administrators

In school year 2000, leadership in attendance centers was provided by 3,583 school principals, while leadership in the districts was provided by 856 superintendents. As mentioned previously, these principals and superintendents were listed as full-time employees in the Teacher Service Record file.

Gender of Administrators

The ratio between the two genders appears to be more balanced for principals compared to the ratio for teachers. In school year 2000, 47% of the principals were females and 53% were males.

However, males clearly dominated among superintendents; nearly 88% of the superintendents were males.

Age of Administrators

On average, principals in Illinois public schools were 50 years old and superintendents were 53 years old. The age distribution of principals and superintendents was:

	Principals	Superintendents
Younger than 30 years old	0.4%	0%
30-39 years old	8%	1%
40-49 years old	31%	19%
50 years or older	60%	80%

Sixty percent of the principals were at least 50 years old. Four out of every five (80%) superintendents were at least 50 years old. This may have serious implications in terms of the need for staff with administrative certificates to replace those who will be retiring in the very near future.

Race/Ethnicity of Administrators

Collectively, minorities (including Black, Hispanic, Asian/Pacific Islander, and Native American) form 19% of the principals in Illinois public schools and only 3% of the superintendents. Availability of minority principal and superintendent candidates is an important factor affecting the racial-ethnic make-up of the administrators. Another factor may be the organization of the education system in terms of districts and schools; it is not always possible to hire principals and district superintendents to reflect the exact proportions of minority students.

Education of Administrators

Section 21-7.1 of the School Code [105 ILCS 5/21-7.1] requires that all school and district administrators possess at least a master's degree. More than one in ten (12%) Illinois school principals had doctorates or other advanced degrees beyond the master's degree level. Two out of three (67%) superintendents held doctorates or other advanced degrees that were beyond the master's degree level.

In summary:

- Full-time educators in Illinois public schools included 124,279 teachers, 3,583 principals, and 856 superintendents. (Part-time educators are excluded.)

- Females dominated the teaching force while males dominated district leadership positions. There were three female teachers (76%) for every male teacher while nearly 88% of the superintendents were male. Among principals, 47% were female.

- The Illinois public school system is served by an aging staff. The average age of teachers was 44 years old; nearly two out of five teachers were at least 50 years old. On average, principals were 50 years old and superintendents were 53 years old. Sixty percent of the principals and 80% of superintendents were at least 50 years old.

- Minorities (including Black, Hispanic, Asian/Pacific Islander, and Native American) were clearly under-represented among educators. Minority teachers formed 15% of the teaching force compared to a minority student population of 39%. Minorities formed 19% of the principals in Illinois public schools and only 3% of the superintendents.

- Illinois educators were reported (from the Teacher Service Record file) to have high levels of education. Fifty-three percent of the teachers held bachelor's degrees, and 47% had degrees at the master's level or higher. All administrators possessed at least a master's degree; 12% of the principals and 67% of the superintendents held doctorates or other advanced degrees.

II. Supply Indicators

Supply, in its broadest sense, includes all educational personnel available to the schools, regardless of whether they are currently employed by schools or not. This section provides information on various indicators of supply, including: (1) personnel retained from the previous year; (2) newly certified individuals; (3) re-entering personnel (i.e., newly hired educators who had prior experience); (4) students in the pipeline (i.e., those currently enrolled in professional preparation programs); and (5) teachers assigned to positions outside of their area of expertise.

Personnel Retained from the Previous Year

The largest supply of educators is the previous year's workforce. The total educator workforce includes teachers, administrators, school service personnel, and other certified staff. In Illinois, nearly 88% of the previous year's total workforce was employed in school year 2000.

[**NOTE:** For retention analyses, part-timers are included because: 1) the number of part-timers is very small and has little or no effect on the final rates, and 2) full-timers can be retained as part-time (and part-timers as full) and trying to report each iteration would be needlessly complex.]

TABLE 1: Retention by Position [Full-Time and Part-Time]

Administrative	**Total Employed 1999**	**Total Retained in 2000**	
District Supt./Asst.	1,201	1,085	90%
Elem. Principal/Asst.	2,652	2,348	89%
Other Supt.	148	130	88%
Director/Asst.	1,006	878	87%
Jr. High Principal/Asst.	899	777	86%
HS Principal/Asst.	1,396	1,202	86%
Other Admin.	950	753	79%
Total Admin.	**8,252**	**7,173**	**87%**

Instructional	**Total Employed 1999**	**Total Retained in 2000**	
Elem. Teacher	57,172	51,842	91%
HS Teacher	31,080	28,149	91%
Jr/Middle Teacher	17,369	15,553	90%
Spec Ed Teacher (all)	21,011	18,824	90%
Total Teachers	**126,632**	**114,368**	**90%**
School Service Personnel	7,918	4,247	91%
Other Certified Staff	5,418	4,215	78%

As noted in **Table 1**, the retention rate for all administrators was 87%, and the rates for these administrative positions ranged from a low of 79% for "other administrators" to a high of 90% for "district superintendents." The retention rate for teachers was slightly higher than that of

administrators (90% vs. 87%) and as **Table 1** shows, the rate was between 90-91% for all levels (i.e., elementary, junior high/middle, secondary) of teachers, including special education.

When looking at rates by assignment, however, retention ranged from a low of 77% (Title I Reading and Math) to a high of 93% (Agriculture). Other areas with relatively low retention rates were: Vocational-Technical Miscellaneous (78%), Bilingual (80%), and Learning Resources/Media (80%).

Math and Science: At 91%, math retention rates were relatively high compared to other assignments. On the other hand, the rate for all science teachers was relatively low (85%), and varied considerably between sub-areas. For example, chemistry and physics had very high retention rates (89-90%) but general science and physical science had very low rates (77% and 81%, respectively).

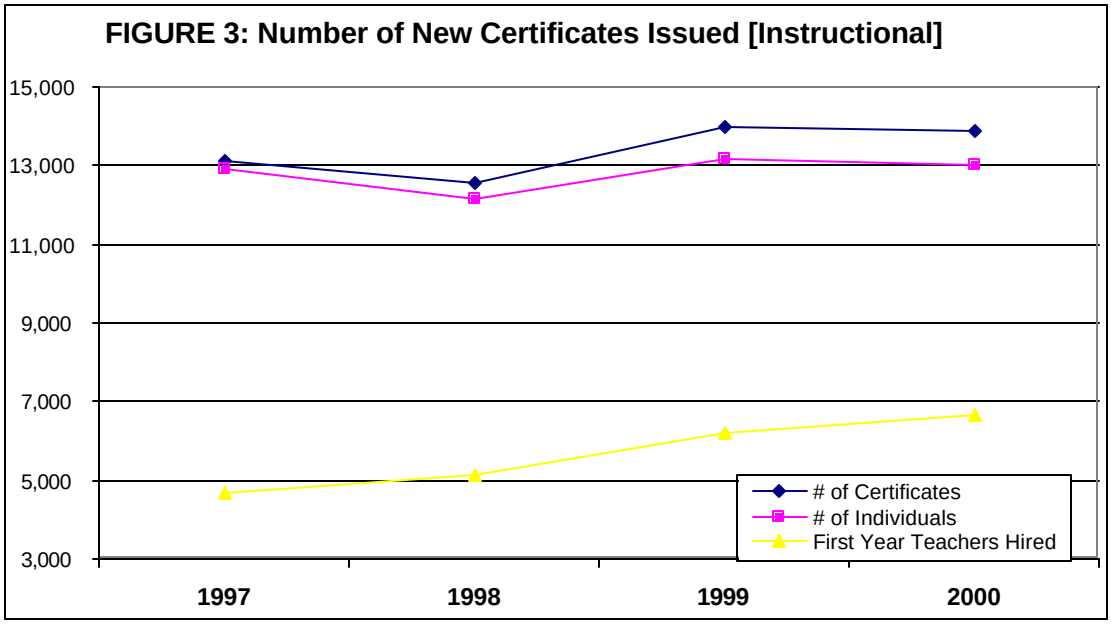
Future Directions: Currently, there are two separate studies being conducted that will focus on the retention of teachers in their first five years of teaching. The North Central Regional Education Laboratory (NCREL) has a contract with the Indiana Policy Center to conduct a retention study of new teachers in four states (Illinois, Indiana, Ohio, and Minnesota). This joint study between NCREL and the National Council of Teachers for America's Future (NCTAF) will also look at approaches used to attract and retain teachers and the effectiveness of these approaches.

Additionally, the Teachers' Retirement System (TRS) and the Illinois State Board of Education (ISBE) plan to conduct a study concerning retention issues specific to Illinois public schools. Currently, TRS and ISBE are discussing parameters and focus of this effort.

Newly Certified Individuals

The second largest source of supply is newly certified, or “first-time” teachers. In Illinois, the number of new certificates issued are counted annually according to the fiscal year (i.e., July 1 to June 30). In order to be considered as supply for school year 2000, teachers had to be certified in the previous school year (i.e., 1998-99).

More than 13,000 new teachers were certified and entered the supply pool in school year 1999 (**Figure 3**). Except for a dip of about a 1,000 in school year 1998, the number of individuals receiving new certificates has been fairly constant for the last four years. The number of first-year teachers hired, however, has increased dramatically. In the same four-year period, the number of first-time teachers hired has increased more than 40%, from 4,671 to 6,655. This increase may indicate a tightening supply, especially at hard-to-staff school districts. In 1997, there were 2.8 individuals certified for every first-time teacher hired. By school year 2000, that ratio has dropped to under 2.0.



At the state level, Illinois is certifying two individuals for every first-year teacher hired. This would seem to indicate a healthy supply of new teachers; however, it is not known to what extent private schools, other states, and other occupations are competing for these candidates. Given the recent economic boom and the resulting low unemployment rates, it is likely that the competition is stiff.

Education is likely to lose in this competition if starting salary is taken into consideration. According to a national study of starting teacher salaries conducted recently by the American Federation of Teachers (2000), teaching had the lowest percent increase in starting salaries over the last five years. As **Table 2** shows, teaching not only has the lowest percent increase (13%), it also has the lowest starting salary ($26,639).

TABLE 2: Five-Year Change in Starting Salaries (U.S.)

Field	1994	1999	Increase
Business	$27,768	$36,886	25%
Math/Statistics	$31,392	$41,698	25%
Computer Science	$31,728	$42,500	25%
Economics/Finance	$29,484	$38,234	23%
Marketing	$28,452	$36,278	22%
Liberal Arts	$27,852	$34,776	20%
Engineering	$35,736	$44,362	19%
Accounting	$28,860	$35,555	18%
Chemistry	$30,960	$36,252	15%
Teaching	**$23,231**	**$26,639**	**13%**

On the positive side, Illinois has a relatively high average salary for teachers compared to other states in the Midwest. At $45,569, Illinois ranked ninth in the United States (50 states and the District of Columbia) for average starting salary according to 1999 data reported by the National Education Association (2000). The eight that topped Illinois were (in rank order): Connecticut, New Jersey, New York, Pennsylvania, Michigan, District of Columbia, Alaska, and Rhode Island.

The average salaries in the six states that surround Illinois are:

Michigan	$48,207
Illinois	**$45,569**
Indiana	$41,163
Wisconsin	$40,657
Kentucky	$35,526
Iowa	$34,927
Missouri	$34,746

Newly Certified by Assignment

There are reasons for some concern when looking at the number of individuals certified by assignment. The number of individuals receiving certificates was used because it is a more accurate indicator of supply than is the number of new certificates or endorsements issued. **Table 3** shows the number of individuals issued new certificates in select positions and assignments. Between school years 1999 and 2000, there was a 16% decrease in the supply of Early Childhood teachers, a 14% decrease in Bilingual, and a 10% decrease in individuals receiving Fine Arts certificates. The number of individuals certified decreased 8% in Math and 7% in English Language Arts. There were also relatively small decreases (under 5%) in the number of certificates issued for administrators and for teachers in Social Science, Physical Education, and Science.

On the plus side, there was a 16% increase in the number of newly certified substitutes from school year 1999 to school year 2000. School districts are finding it increasingly harder to hire substitute teachers as many former substitute teachers have now found permanent teaching positions. Johnston (1999) reported that employment agencies are now in the business of helping some schools get substitute teachers. Previously, when substitutes were easily available, schools called the substitutes directly when the need arose.

To determine the number of individuals issued new certificates, the assignments were collapsed and the number of unique social security numbers were counted. For example, an individual who was issued an endorsement in physics, physical science, and chemistry was counted once in the category of *Science*. If that same individual also received an endorsement in art, that person would also be included in the *Fine Arts* category. This approach greatly reduces redundancy within assignments. However, there is still some duplication *between* the areas listed in **Table 3**. Therefore, the number of individuals appears to be much higher than the 13,155 individuals issued new certificates in 1999. The difference between the number of individuals and the number of endorsements issued is shown in **Appendix B**.

The number of individuals receiving vocational education certificates could not be calculated due to the vast number of endorsements in each of the five areas. This is only a minor problem since there is usually a one-to-one correspondence between vocational-technical endorsements and main assignments (e.g., welding, drafting). In sum, there were 1,384 endorsements issued in school year 1999 for the five vocational-technical areas: Agriculture (156), Business (850), Family and Consumer Science (242), Health Occupations (3), and Industrial Occupations (133).

TABLE 3: Number of Individuals Issued New Certificates

Certificate Description	#-of Individuals* 1999	2000	Change
Administrative	1,465	1,402	**(63)**
Resident Teacher	17	9	**(8)**
School Service Personnel	751	753	2
Instructional			
Early Childhood	857	723	**(134)**
English Language Arts	3,083	2,866	**(217)**
Fine Arts	873	790	**(83)**
Health Education	189	192	3
Mathematics	846	779	**(67)**
Physical Education	838	799	**(39)**
Science	1,053	1,012	**(41)**
Self-Contained Elementary	5,546	5,600	54
Social Science	3,377	3,216	**(161)**
Special Education	2,242	2,244	2
Transitional Bilingual	630	540	**(90)**
Substitute-- 90 days teaching	11,486	13,246	1,760

* Note: counts may be duplicated **between** areas (e.g., an individual may be counted once in math and once in self-contained)

Re-entering Personnel

Educators returning to the profession are the third largest source of supply; 5,363 educators re-entered the public school system in school year 2000. As **Table 4** shows, between 41% and 91% of educators hired in that year were re-entering professionals. In general, re-entries made up a greater percentage of new hires in Chicago than Downstate. In Chicago, over half of newly hired educators were re-entries, and the proportion of re-entries ranged from a low of 49% for teachers to a high of 100% for administrators. For Downstate, the overall percentage was much lower (41%) but the proportions followed an identical pattern with the lowest rate being for teachers (39%) and the highest for administrators (90%).

TABLE 4: Number of Re-entries Hired in School Year 2000

POSITION	Chicago n	Chicago %-New	Downstate n	Downstate %-New	STATE n	STATE %-New
Administrators	10	100%	153	90%	**163**	**91%**
Teachers	1,089	49%	3,608	39%	**4,697**	**41%**
School Service Personnel	31	60%	256	47%	**287**	**48%**
Other Certified Staff	72	71%	144	73%	**216**	**72%**
ALL	1,202	51%	4,161	41%	**5,363**	**43%**

In addition to being an important source of new hires, the number of re-entries is an important indicator of another facet of supply—namely, the reserve pool. The 1999 Educator Supply and Demand study found that Illinois had more than 100,000 certified educators who were not currently employed in Illinois public schools. What is not known, and would be extremely difficult to ascertain, is the number of educators who would be willing to enter education given the prevailing conditions. In reviewing historical data, the number of educators returning to the profession had a dramatic peak in school year 1995 due to the early retirement option. In school year 1994, only 3,300 re-entries were hired. In school year 1995, the number ballooned to more than 5,400. This represents an increase of 62%, or nearly 2,100 teachers, more than the previous year's re-entries.

Illinois is again facing a retirement crunch (see "Retirement Projections," page 19). Using 1995 as a reference point, it is likely that between 5,000 and 6,000 educators in the reserve pool would re-enter the profession if the right positions became available. This reserve pool may ameliorate the effects of the upcoming retirement bubble.

Students in the Pipeline

Students currently enrolled in professional preparation programs are the best indicators of future supply. By tracking enrollment trends in both teacher preparation and in alternative routes to certification, one should be able to derive some notion of whether the educator supply is likely to increase or decrease in the next three to four years. In order to project future supply, however, one would need to track how many program completers (i.e., students who completed all requirements of an approved teacher education program) actually receive certification in Illinois.

The current effort to develop a data warehouse that will house higher education, certification, and educator employment data is crucial to this undertaking. The database has been designed and the first trial of the electronic system for collecting enrollment data from the 56 teacher preparation institutions in Illinois and merging it with Illinois State Board of Education employment and certification data is scheduled for pilot-testing fall 2001.

In school year 1999, there were nearly 20,000 undergraduate and 3,000 graduate students enrolled full-time in professional preparation programs in Illinois (see **Table 5**).

TABLE 5: Professional Preparation Enrollments

	Enrollments
	1999
Undergraduate Full-Time	19,930
Undergraduate Part-Time	2,587
Graduate Full-Time	3,304
Graduate Part-Time	10,534

Source: Div. of Professional Prep.

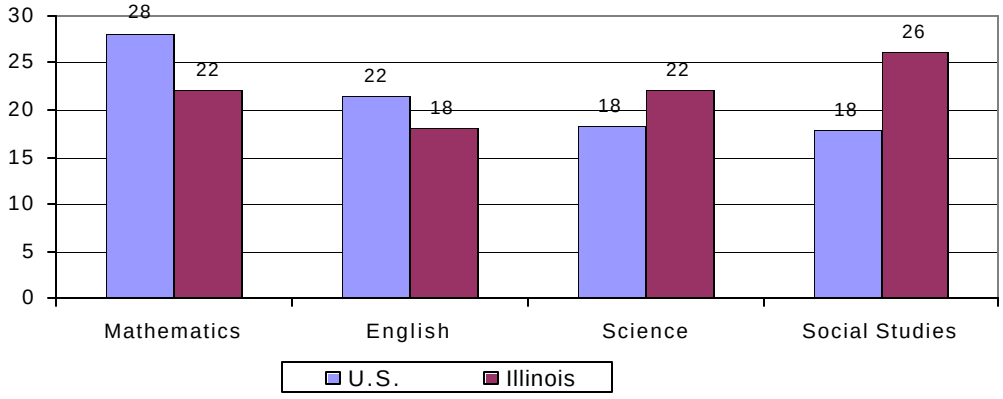
Out-of-Field Teaching

From a survey of all Illinois Regional Offices of Education (ROE) conducted in the summer of 2000, the Illinois State Board of Education's Regional Offices Support Division estimated that 498 Illinois teachers were teaching out of field. However, this is most likely an undercount because: (1) not all ROEs responded to the survey, (2) "out-of-field teaching" was not defined, and (3) respondents' fear of sanctions.

Education Week (Archer 1999) reported that out-of-field teaching is a problem nationwide, and that it is just as rampant in Illinois. Out-of-field teaching may be defined in various ways, often in terms of a lack of certification or a lack of academic qualifications. For this discussion, an out-of-field teacher is defined as a certified teacher who teaches one or more classes in mathematics, English, science, or social science without having at least an undergraduate or graduate-level major or minor in the particular subject.

Based on the U.S. Department of Education 1993-94 Schools and Staffing Surveys (SASS), Ingersoll (1999) reported that nationally about 28% of public high school mathematics teachers do not possess even a college minor in mathematics. As shown in **Figure 4**, the corresponding figures for other subjects were: English, 22%; science, 18%; and social studies, 18%. From the same survey, the percent of Illinois public high school teachers who did not have either a college major or minor for the subjects they taught were: mathematics, 22%; English, 18%; science, 22%; and social studies, 26%.

Figure 4: Out-of-field Teaching (Percent)



Ingersoll reported that teachers in schools with high concentrations of poor children are more prone to be teaching out-of-field than are teachers in more affluent schools. Smaller schools, those with fewer than 300 students, had higher levels of out-of-field teaching in core subjects than the larger schools, those with at least 600 students. Beginning teachers are more likely than experienced teachers to be assigned out-of-field teaching. He also reported that students in low-track classes are more likely to be taught by out-of-field teachers than students in high-track classes.

According to Ingersoll, the three explanations typically offered for out-of-field teaching include: (1) inadequate training or education of teachers; (2) inflexible teacher unions; and (3) shortage of teachers. He contends that these explanations may only be partly accurate. Ingersoll hypothesized that, in addition to incorrect assignment of teachers, another root cause of out-of-field

teaching is that teaching is largely treated as lower-status work, not as a profession but as a "semi-profession." This has led to teaching being beset by problems of both recruitment and retention.

Ingersoll found that less than 20% of teacher turnover is attributed to retirement. This means that four out of five teachers leave teaching for reasons other than retirement, many to seek better careers or simply because they are dissatisfied with teaching. To alleviate the situation, Ingersoll suggested that for high-demand areas, schools should consider offering incentives or provide free retraining to attract and retain teachers. Principals should stop disproportionately burdening beginning teachers with out-of-field assignments. New teachers already leave the occupation at very high rates. This underscores the importance of effective mentoring programs for new teachers. In a survey conducted in September 2000 by the Research Division, it was found that only about 500 Illinois districts had mentoring/induction programs.

Ingersoll maintains that since out-of-field teaching can adversely affect a school's accreditation status, educators are often skeptical of out-of-field teaching data obtained from schools, districts, or the state. SASS, on the other hand, is a large-scale nationwide survey that collects data on teachers and schools every few years. Teachers surveyed by SASS are not specifically asked if they are teaching out-of-field. Out-of-field teaching data are computed from the vast array of SASS information. The next SASS will be for school year 2000; the results are not available yet.

In summary:

- The largest supply of educators is the previous year's workforce; nearly 88% of the previous year's total workforce was employed in school year 2000. The retention rate for all administrators was 87%, while the retention rate for teachers was 90%.
- The second largest source of supply is newly certified or "first-time" teachers. More than 13,000 new teachers were certified in school year 1999. In school year 2000, 6,655 first-time teachers were hired by Illinois public schools from the 13,000 new teachers.
- Between school year 1997 and school year 2000, the number of first-time teachers hired increased considerably, from 4,671 to 6,655. In the same four-year period, the ratio of the number individuals certified to first-time teachers hired declined from 2.8:1 to 2.0:1.
- Compared to other professions, teachers are reported to have a relative low starting salary ($26,639 nationwide). However, the average salary of Illinois teachers at $45,569 puts the state in ninth position in the country.
- The third major source of supply includes educators returning to the profession; 5,363 educators re-entered the public school system in school year 2000. They are educators who returned after having left education for at least one year.
- The U.S. Department of Education Schools and Staffing Surveys found that out-of-field teaching is a common problem nationwide. In Illinois, the proportion of public high school teachers who did not have either a college major or minor for subjects they taught were: mathematics, 22%; English, 18%; science 22%; and social studies, 26%.
- In spite of the high attrition rate among beginning educators, only about 500 Illinois public school districts have mentoring/induction programs to help new educators as they begin their careers.

III. Demand Factors

Demand refers to the need for educational personnel to fill vacant positions. This section presents information on the various factors affecting demand, including: (1) changes in student enrollments; (2) workforce growth; (3) the number of new teachers and administrators hired; (4) the number of educators eligible to retire; and (5) attrition rates (i.e., the rate at which educators leave the profession).

Data in this section were obtained from the Teacher Service Record (TSR). The TSR contains employment data on all Illinois public school personnel and is collected annually in the fall by the Illinois State Board of Education. It takes more than nine months to edit the annual TSR file; so, the most current file that could be used for this study contains data from school year 2000. Data from the 1999-00 TSR is referred to as "2000" and data from the 1998-99 school year as "1999." For comparative purposes, 2000 is considered the "current year" and 1999, the previous year.

Changes in Student Enrollments

There is a direct relationship between student enrollment and demand for educators. Total enrollment for school year 2000 was 1,953,377. From school year 1999, total student enrollment increased by 17,858 students, or nearly 1%.

Illinois public school enrollments have been increasing since school year 1990, and that trend is expected to continue through school year 2008 (Illinois State Board of Education, 2000). A slight decrease in total enrollments is projected for the two years following. Most of the growth, however, will be at the secondary level. Secondary enrollments, currently at 552,571, are expected to peak in school year 2008 at 639,827, an increase of nearly 16% or 87,256 students. This growth will significantly affect the demand for teachers especially at the secondary level (see **Table 6**).

TABLE 6: Enrollment Projections Through School Year 2008

		2003			2008		
			Change (00)			Change (00)	
	2000	Enrollment	n	%	Enrollment	n	%
Elementary	1,400,806	1,432,834	32,028	2%	1,404,217	3,411	0.2%
Secondary	552,571	580,357	27,786	5%	639,827	87,256	15.8%
TOTAL	1,953,377	2,013,191	59,814	3%	2,044,044	90,667	4.6%

Elementary enrollments, on the other hand, are projected to peak in school year 2003 at 1,432,834 and then decline slightly (about 5,500 students a year) for the next five years. The decrease in elementary enrollments is largely due to the decrease in the number of live births, which peaked in 1990 at 195,499, and declined each of the next seven years to a low in 1997 of 180,649 (an 8% decrease).

Workforce Growth

Total Educator Workforce

The educational workforce has increased, partially in response to the growth in student enrollments. For school year 2000, the total full-time educator workforce was 145,304, which represents an increase of 3,516 or 2.5% over the previous year's total (see **Table 7**). While student enrollments only increased 1%, the rate of growth for administrators and teachers was over 2.5%. Thus, the educator workforce is growing at a much faster rate than student enrollments.

TABLE 7: Educator Workforce Growth Rates

	2000	Change From 1999	Growth
Administrators	8,315	215	2.7%
Teachers	124,279	3,100	2.6%
School Service Personnel	7,466	159	2.2%
Other Certified Staff	5,244	52	1.0%
Total Workforce	145,304	3,516	2.5%

Administrators

The total number of full-time administrators employed in Illinois public schools for school year 2000 was 8,315, an increase of 215 (2.7%) from last year's total. As can be seen in **Table 8**, Chicago had a slightly larger percentage increase in demand for administrators than Downstate (2.9% vs. 2.6%).

TABLE 8: Administrator Growth Rates

	State	Downstate	Chicago
1999	8,100	7,113	987
2000	8,315	7,299	1,016
Change	215	186	29
	2.7%	2.6%	2.9%

[**NOTE**: Currently, the Illinois State Board of Education has two years of administrator data. Historical demand data for administrators will be included in next year's report.]

Teachers

The total number of full-time teachers employed in Illinois public schools in school year 2000 was 124,279, an increase of 3,100 (or 2.6%) from school year 1999. As stated previously, the teacher workforce is growing at a much greater rate than student enrollments.

As can be seen in **Table 9**, the total number of full-time teachers in Illinois has increased an average of 1.8% a year since school year 1989, from a low of 102,540 to a high of 124,279 in

school year 2000. The number has increased every year except school year 1994, when the total employed dropped about 550 due to a decrease in Chicago of more than 1,500 teachers. Since school year 1994, the teacher workforce has increased at an average rate of 2.3%, or about 3,000 teachers a year.

TABLE 9: Total Full-Time Teachers Employed

	Downstate	Chicago	Total Employed	Change
1989	80,696	21,846	102,542	
1990	81,240	22,337	103,577	1.0%
1991	83,234	22,759	105,993	2.3%
1992	84,837	22,645	107,482	1.4%
1993	85,208	23,462	108,670	1.1%
1994	86,220	21,898	108,118	-0.5%
1995	87,592	22,512	110,104	1.8%
1996	89,820	23,033	112,853	2.5%
1997	92,121	23,523	115,644	2.5%
1998	94,622	23,469	118,091	2.1%
1999	97,540	23,639	121,179	2.6%
2000	100,711	23,568	124,279	2.6%

Avg. Growth Since 1989:	1.8%
Avg. Growth Since 1994:	2.3%

However, when comparing the growth rates between Chicago and Downstate, a different picture emerges (see **Table 10**). Chicago's teaching force increased by approximately 500 teachers a year from school year 1995 to school year 1997 but has remained fairly constant over the last three years. On the other hand, the Downstate force has been growing at a steady pace over the same timeframe. In fact, the growth rate has doubled, from 1.6% in school year 1996 to 3.3% in school year 2000. Therefore, when looking at the number of teachers employed, the teacher workforce seems to be growing at a much faster rate Downstate than in Chicago.

TABLE 10: Teaching Force Growth Rates

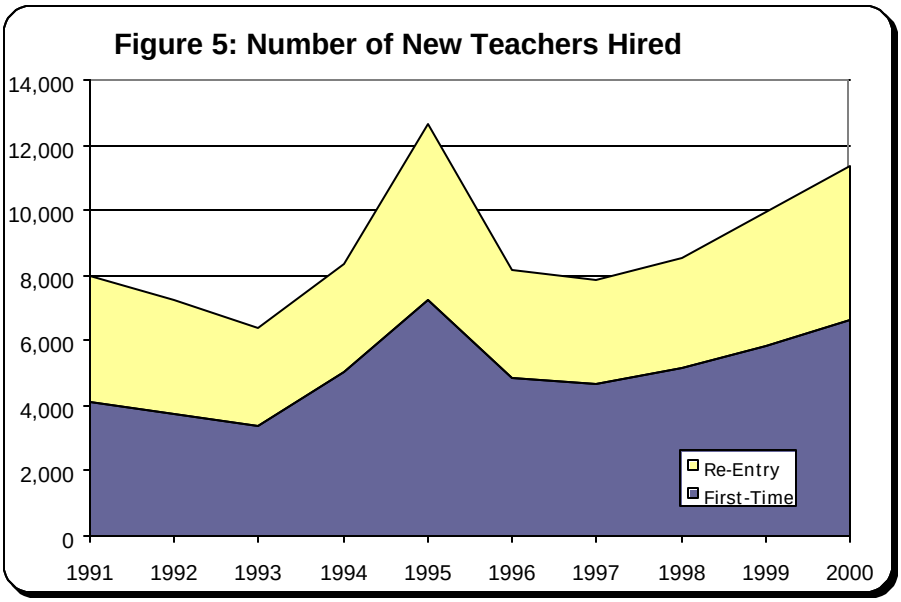
	Downstate	Chicago
1994-95	1.6%	2.8%
1995-96	2.5%	2.3%
1996-97	2.6%	2.1%
1997-98	2.7%	-0.2%
1998-99	3.1%	0.7%
1999-00	3.3%	-0.3%

Number of New Teachers Hired

Figure 5 shows the number of new teachers hired for each of the last ten years. The sharp peak in school year 1995 is due to the early retirement option. Since that anomaly, and the subsequent decrease in the number of new teachers hired, there has been a dramatic increase in the trend. In school year 1997, a total of 7,834 new teachers were hired, and in school year 2000 that number rose to 11,352. This represents a 45% increase in the demand for new teachers. The number of

re-entries hired each year has increased at an even greater rate. In school year 1997, 3,163 re-entries were hired and in school year 2000, that number rose to 4,697 (a 48% increase).

Of the 11,352 new teachers hired for school year 2000, the majority (6,655 or 59%) were first-time teachers. As **Figure 5** shows, teachers re-entering the workforce filled a significant number of district vacancies over the last ten years. Teachers with greater than one year of experience who were not employed in an Illinois public school the previous year (i.e., "re-entries"), filled 4,697 vacancies and accounted for 41% of the new teachers hired. It is interesting to note that the 60/40 proportion of first-timers to re-entries has remained nearly constant for the last five years.



As **Table 11** shows, the biggest category of newly hired teachers was elementary (5,093), followed by high school (2,445), and special education teachers (2,309). Special education, at 11.2%, had the highest percentage of newly hired teachers and was the only category where the proportion of first-timers to re-entries was 50/50. The remaining three categories mirrored the historical 60/40 split.

TABLE 11: New Teachers Hired in School Year 2000 (Full-Time Only)

Instructional Staff	Total Employed	Total New n	Total New %	First Time %-New	Re-entry %-New
Special Ed.	20,639	2,309	11.2%	49%	51%
Elem. Teacher	56,312	5,093	9.0%	61%	39%
Jr/Middle Teacher	17,218	1,505	8.7%	62%	38%
HS Teacher	30,110	2,445	8.1%	60%	40%
ALL	**124,279**	**11,352**	**9.1%**	**59%**	**41%**

Change in Demand for Teachers

As stated in the previous section, the number of new teachers hired in school year 2000 was 11,352. When added to the 2,060 unfilled positions reported in December of 1999, demand for

teachers increased by 13,412 or 11.1% from school year 1999. In terms of *number*, the four biggest areas of need were Self-Contained Classroom (4,091), Special Education (2,946), English Language Arts (993), and Learning Disabled (891). (See **Appendix C** for the complete list.) *Percent* increases in demand ranged from a low of 2% for Driver's Education to a high of 22% for Speech and Language Impaired. There were eleven areas with increases of 15% or greater and six of those were in special education. As **Table 12** shows, the five categories with the highest percent increases were: Speech and Language Impaired (22%), Cross Categorical (20%), Multiply Handicapped (19%), Behavior Disordered (19%), and Bilingual (19%).

TABLE 12: Largest Percent Increase in Demand by Assignment

Assignment	Employed 1999	2000 Demand			
		Total New Hired	Unfilled Positions	TOTAL NEED (vs. 99)	
Speech and Language Impaired	2,212	338	148	486	22%
Cross Categorical	3,065	367	238	605	20%
Multiply Handicapped	179	25	9	34	19%
Behavior Disordered	2,167	297	108	405	19%
Bilingual Education	1,955	344	20	364	19%
English as a Second Language	514	75	15	90	17%
Hard of Hearing	262	29	17	46	17%
Adapted P.E.	115	15	4	19	17%
Foreign Language-- Spanish	1,614	212	31	243	15%
At-Risk / Pre-K	1,188	121	56	177	15%
Early Childhood	988	122	22	144	15%

Science and Math. Contrary to popular belief, demand for science and math teachers was relatively low. Only 620 math teachers and 636 science teachers were needed to fill demand in school year 2000 (which was less than the 658 needed in Physical Education). As a percent of last year's workforce, demand increased 9.6% for math and 10.5% for science. In science, the assignment with the largest increase was General Science (n=283, 11%), and the area with the smallest increase was Physical Science (n=27, 8%). In Math, the largest increase was in Basic Math (n=287, 10%) and the smallest was in Geometry (n=31, 6%).

Number of New Administrators Hired

In school year 2000, there were 180 new administrators hired, nearly all of which were re-entries (163, 91%). Only 17 of the administrators hired (9%) had one year of experience or less. All administrative categories in **Table 13** showed very small percentages of new hires—between 2-3%.

When looked at by individual position, however, it was found that demand was relatively higher for the positions of Assistant Elementary Principal (n=64, 18%) and Assistant Junior High Principal (n=42, 12%).

TABLE 13: New Administrators Hired in School Year 2000 (Full-Time Only)

POSITION	Total	Total New		First Time	Re-entry
District Supt./Asst.	1,183	30	3%	10%	90%
Elem. Princ./Asst.	2,677	42	2%	7%	93%
Jr. High Princ./Asst.	965	23	2%	4%	96%
H.S. Princ./Asst.	1,418	29	2%	3%	97%
Jr./Sr. Dean	597	11	2%	27%	73%
Director/Asst.	1,015	29	3%	7%	93%
Other Admin.	460	16	3%	25%	75%
	8,315	**180**	**2%**	**9%**	**91%**

Change in Demand for Administrators

The change in demand for administrators since school year 1999 has been relatively low, about 3%. As stated in the previous section, the number of new administrators hired in school year 2000 was 180. When added to the 73 unfilled positions reported in December of 1999, demand for administrators increased by 253, or 3% from school year 1999. While the percentage increase is relatively low, the impact may not be. Because of the relatively small number of administrators per school, any shortage is likely to have a major effect at the local level.

Despite the relatively small growth in demand and the relatively large supply of newly certified administrators, school districts are already feeling the pinch. In a 1998 random sample of 403 rural, suburban, and urban districts nationwide, the Educational Research Service (Education World, 2000) found that approximately half of the districts reported a shortage in the supply for K-12 principals. According to those responsible for the hiring, “long hours, too much stress, and too little pay for the weighty responsibilities," were the reasons given by more than 60% of the respondents.

It is likely that the demand for administrators in Illinois will increase dramatically in the next three to four years. Nationally, the Bureau of Labor Statistics (Education World, 2000) projects a 10 to 20% increase in the need for school administrators through 2005. In its 1999 annual survey of principals, the Illinois Principals Association (2000) found that by school year 2005, 45% of the current principals would be leaving education. Of those, 33% indicated that they were going to retire.

Retirement Projections

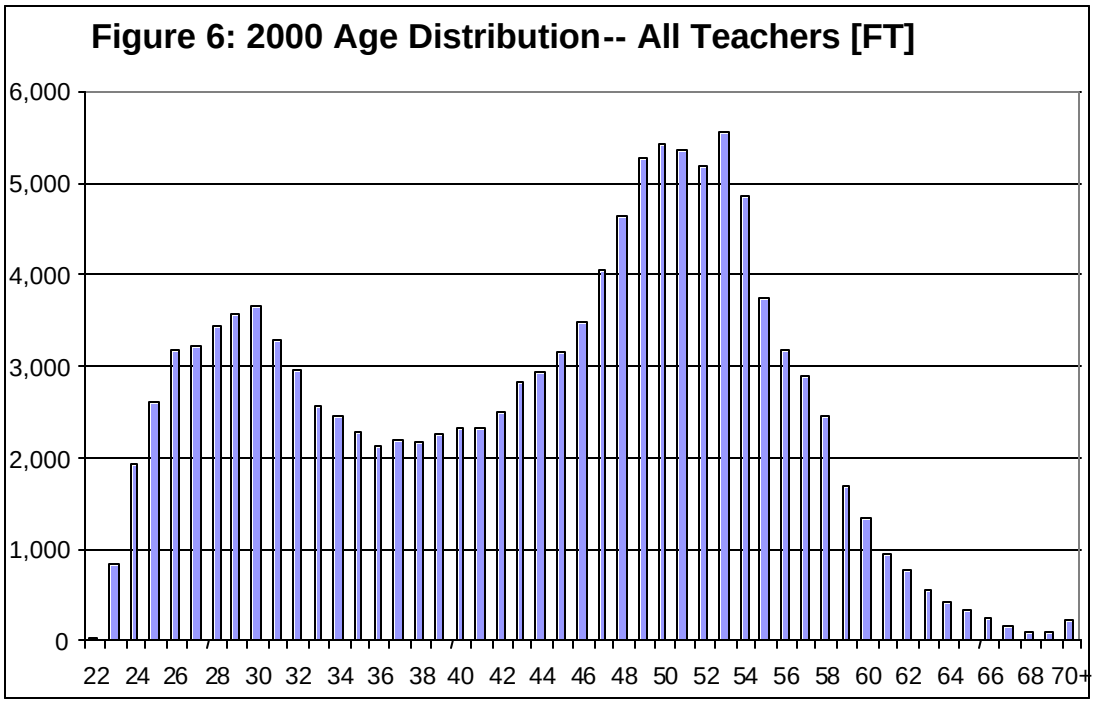
Age and years of experience were used to project the number of educators who will be eligible to retire through school year 2003. For the purposes of this study, ***Eligible to Retire*** was defined as an educator who is at least 55 years old and has 20 years of experience or more.

Age Distributions of Teachers and Administrators

Teachers

The age distribution of full-time teachers has not changed significantly since last year. The teaching force in Illinois continues to grow older. There are now 45,649 teachers aged 50 or older who represent nearly 37% of the total teaching force. This is an increase of about 1,200 teachers over last year's group, which comprised 35% of the total teaching force.

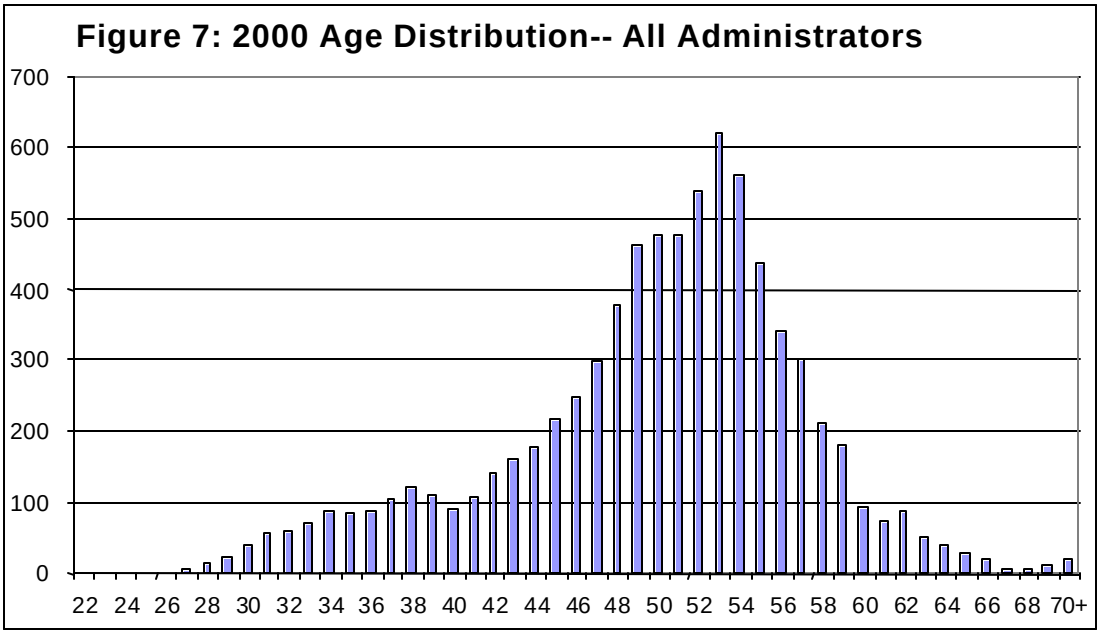
As **Figure 6** shows, the peak of the age distribution begins at age 49 and reaches its apex at age 53. Therefore, the number of teachers in the 50+ age group is likely to peak in school year 2002 and then begin to decline significantly over the next four years. This is good news because it means the end to the "retirement bubble" is in sight. The bad news is that the group most likely to retire (i.e., those aged 55 or older) is going to increase dramatically for the next two years and plateau for three to four years before it begins its substantial decline in school year 2007. Currently, nearly 15% of the current teaching force is eligible to retire (n=19,237).



Administrators

Like that of teachers, the age distribution of administrators also peaks at age 53 (see **Figure 7**). However, unlike the teacher distribution, there is not a secondary peak at the lower end of the distribution. This indicates a larger proportion of administrators who are in the over-50 age group. This is a major concern since nearly 60% of the administrators (n=4,852) are age 50 or older.

Therefore, the impact of age on demand is going to be much greater for administrators than for teachers. There are 2,026 administrators aged 55 and above. In considering those with 20 or more years of experience, 24% (n=2,023) of administrators are currently eligible to retire.



Eligible to Retire by Position

Currently, there are 24,436 educators, or 17% of the workforce, eligible to retire (see **Table 14**). Teachers account for nearly 80% of the eligibility pool. The percent of the workforce eligible to retire ranges from 15% to 27%. Teachers have the smallest percent of their workforce eligible to retire (15%), but the largest number (19,237). In contrast, Other Certified Staff (e.g., Librarian/Media Specialist) has the largest percent eligible to retire (27%) but the smallest number (1,405). Twenty-four percent of both Administrators and School Service Personnel are eligible to retire.

TABLE 14: Eligible to Retire by Position [FT]

	Employed 2000	Eligible to Retire	
		n	%
Administrators	8,315	2,023	24%
Teachers	124,279	19,237	15%
Other Certified Staff	5,244	1,405	27%
School Service Personnel	7,466	1,771	24%
Total	**145,304**	**24,436**	**17%**

Teachers

- There were 19,237 teachers, or 15% of the workforce, eligible to retire in school year 2000.
- Elementary and high school teachers had the highest percent eligible to retire (17%), although there are nearly twice as many elementary teachers eligible (i.e., 9,365 vs. 5,200).
- Eligibility rates were relatively low for middle school teachers (14%).
- Special education teachers had the lowest number (2,262) and the lowest percent eligible to retire (11%).

Administrators

- There were 2,023 administrators, or 24% of the workforce, eligible to retire in school year 2000.
- Eligibility rates varied greatly from 9% (Junior High Dean) to 58% (Regional Superintendent).
- Excluding Other Administrator, the positions with the highest percent eligible to retire were Regional Superintendent (58%), District Superintendent (35%), and Assistant District Superintendent (31%).
- The positions with the greatest number eligible to retire were Elementary Principal (589), District Superintendent (298), and Director (242).

Other Educators

- There were 1,771 School Service Personnel and 1,450 Other Certified Staff eligible to retire in school year 2000.
- Positions with the largest percent eligible to retire were School Nurse (33%), Library/Media Specialist (32%), and Guidance Counselor (30%).
- The greatest number eligible to retire were in the positions of Guidance Counselor (849), Library/Media Specialist (613), and Coordinator (444).

For the complete list of positions, see **Appendix D**.

Eligible to Retire by Assignment

As stated previously, there were 19,237 teachers eligible to retire in school year 2000. The five areas with the largest number eligible to retire comprised nearly 70% of the eligibility pool. The areas were: Self-Contained Classroom (7,201), Special Education (2,262), English Language Arts (1,670), Science (999), and Social Science (983).

Overall, 15% of the teaching workforce was eligible to retire. However, there were a number of areas with significantly higher percentages of their workforce in the eligible pool. These areas are likely to suffer greater attrition in the near future. Areas with 20% or more of their workforce eligible to retire (and at least 100 teachers in the eligible pool) include: Driver Education (26%), Industrial Occupations (21%), Business (21%), Other Foreign Language (21%), English as a Second Language (21%), Title I (20%), and Chemistry (20%). On the plus side, the percent of special education teachers eligible to retire is relatively low (11%), so fewer will be lost due to retirements.

Appendix E shows the breakdown of the number and percent of the workforce eligible to retire by assignment at the elementary, middle, and secondary level. Highlights from the chart are summarized below. [**NOTE**: Only areas with 50 or more eligible teachers were included.]

Elementary

- The areas with the largest *number* of teachers eligible to retire are: Self-Contained (7,038), Title I (604), Physical Education (274), Music (252), and Bilingual (178).
- Areas with the largest *percent* of their workforce eligible to retire are: English as a Second Language (23%), Learning Resources/Media (21%), Title I (20%), and Gifted (20%).

Middle/Junior High

- The areas with the largest *number* of teachers eligible to retire are: English Language Arts (602), Social Science (367), Math (272), General Science (263), and Physical Education (170).
- Areas with the largest *percent* of their workforce eligible to retire are: Industrial (20%), Social Science (18%), and Art (17%).

Secondary

- The areas with the largest *number* of teachers eligible to retire are: English Language Arts (970), Math (615), Social Science (591), Physical Education (395), and Industrial Occupations (286).
- Areas with the largest *percent* of their workforce eligible to retire are: Driver Education (26%), Industrial Occupations (22%), Vocational-Technical Miscellaneous (22%), Business (21%), Other Foreign Language (21%), and Chemistry (20%).

Projections of Educators Eligible to Retire in School Year 2003

From school year 1999 to school year 2000, the pool of educators eligible to retire increased by 1,629, or 7%. **Table 15** shows the projected increase of the eligible pool in school year 2003, based on the age and experience distribution of educators in school year 2000. In sum, the total number of educators eligible to retire is expected to rise nearly 40%, or by more than 9,500 by school year 2003. The projections assume a 12% attrition rate in years 2001-2003. If the attrition rate is less, the eligible pool will be even larger in school year 2003. On the other hand, if the attrition rate is higher than 12% over the next three years, the eligible pool in school year 2003 will be significantly smaller.

TABLE 15: Projection of Eligible to Retire by Position

	Eligible 1999	Eligible 2000	Projected* Eligible 03	3-Year Increase	
				n	%
Administrators	1,794	2,023	2,973	950	47%
Teachers	18,006	19,237	26,922	7,685	40%
School Service Personnel	1,683	1,771	2,199	428	24%
Other Certified Staff	1,324	1,405	1,850	445	32%
	22,807	**24,436**	**33,945**	**9,509**	**39%**

*Projections assume 12% attrition of the previous year's pool.

Administrators

Compared to the other areas listed in **Table 15**, the eligible pool for administrators is expected to have the largest percent increase in school year 2003 (47%). Within the administrator group, the rate of increase is expected to be even higher for the positions of Junior High Principals and Assistants (67%), and Other Administrators (53%). The biggest increase in the number eligible to retire will be for Elementary Principals and Assistants (n=294; a 45% increase), and for District Superintendents and Assistants (n=200; a 50% increase).

Teachers

It is expected that nearly 27,000 teachers will be eligible to retire in school year 2003, a 40% increase from school year 2000. As **Table 16** shows, there was a relatively small 7% increase in the eligibility pool from 1999 to 2000. However, in school years 2001 and 2002, that rate will nearly double (i.e., 13% and 14%, respectively).

TABLE 16: Projected Change in Teachers Eligible to Retire

	Teachers Eligible to Retire	Change from Prior Year	
		n	%
1999	17,965	-	-
2000	19,237	1,272	7%
PROJECTIONS*			
2001	21,784	2,547	13%
2002	24,730	2,946	14%
2003	26,992	2,262	9%

As presented in the Age Distribution section, the number entering the eligible pool is expected to peak in school year 2002 when teachers who are currently 53 years of age will first enter the eligible pool. Since they represent the largest number of teachers relative to the other age groups, the number entering the eligible pool should begin to decline in subsequent years. In school year 2003, the rate of increase declines to 9%, but the number entering the eligibility pool remains relatively high (n=2,262). Based on the age distribution of teachers, it is expected that the number entering the eligibility pool will remain fairly constant until school year 2006. It is important to note that although the number entering each year may decrease, the size of the eligibility pool is likely to grow through school year 2006 (due to low attrition rates).

The eligible pool is expected to increase by a total of 7,755 teachers between school years 2000 and 2003. The areas projected to have the largest increase in number eligible to retire are: Self-Contained (9,687), Special Education (3,199), English Language Arts (2,399), Math (1,414), and Physical Education (1,292). On the other hand, the estimated increase for Science is relatively small (n=318; a 32% increase).

As shown in **Appendix F**, there were eight areas with expected increases in the eligibility pool between 54 and 88%. Not counting the "Other" category, they were:

Health Education	88%
Learning Resource/Media	59%
Reading Improvement	59%

Computer Education	55%
Other Foreign Language	55%
Vocational-Technical Misc.	55%
Math	54%
Physical Education	54%

Other Educators

Compared to teachers and administrators, the categories of Other Certified Staff (OCS) and School Service Personnel (SSP), are projected to have modest increases. The number of OCS personnel is expected to increase by 445, or 32%, from school year 2000 to school year 2003. Likewise, SSP will increase by 428 or 24% in the same time period.

The positions projected to have the largest increase in number eligible to retire are: Guidance Counselor (240), Coordinator (170), Library/Media Specialist (138), and Social Worker (106). The positions with the largest percent increases (excluding those with less than 50 eligible to retire) are: Supervisor (54%), Coordinator (38%), Psychologist (33%), Consultant (30%), and Guidance Counselor (28%). See **Appendix G** for the complete list.

Attrition Rates

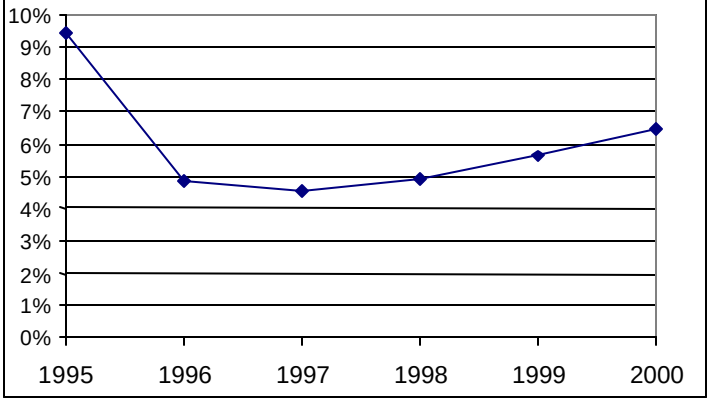
The rate at which educators leave the profession is directly related to demand. To calculate attrition rates, the 1999 Teacher Service Record (TSR) was compared to the 2000 file. Full-time educators who were in the 1999 file, but not in the 2000 file, were deemed to have "left education." Since the TSR only tracks educators employed in Illinois public schools, some of these educators may be employed in private schools or in education in another state; therefore, these rates represent the upper limit of attrition (i.e., are a liberal estimate).

Teachers

Nearly 7% of teachers (n= 7,859) left education between school years 1999 and 2000.

As **Figure 8** shows, attrition rates peaked in school year 1995 due to the early retirement option. Since then, attrition rates have ranged from a low of 4.6% in school year 1997 to a current high of 6.5% in school year 2000. The trend since school year 1997 represents a 40% increase in attrition. If this trend continues, attrition rates for teachers will be more than 7% in school year 2001 and could be nearly 8.5% in school year 2003.

Figure 8: Historical Teacher Attrition



When looking at attrition by assignment, rates ranged from a low of 4% (Reading Improvement) to a high of 13% (Health Occupations). Assignments with the highest attrition rates (not counting "Other") were:

Health Occupations	13%
Bilingual	10%

Foreign Language—Other	8%
Vocational-Technical Misc.	8%

The assignments with the largest number of teachers who left education were: Self-Contained Classroom (2,683), Special Education (1,281), English Language Arts (639), Science (411), and Math (397). For the attrition rates by assignment, see **Appendix H**.

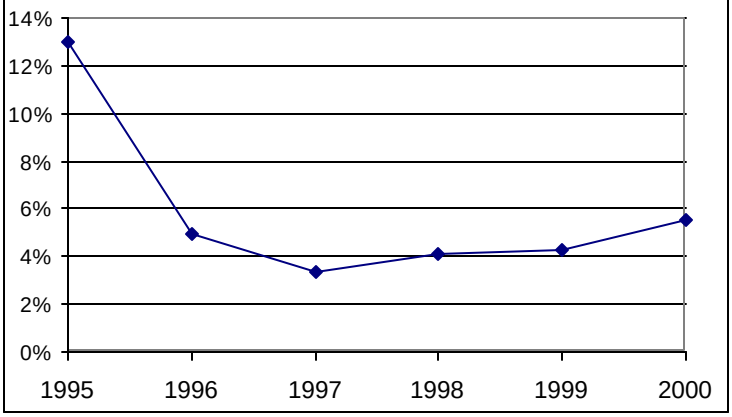
Science and Math: The attrition rate for Math was relatively low, about 6% (n=397), and the overall rate for Science was only slightly higher, nearly 7% (n=411).

Administrators

More than 5% of administrators (n=406) left education between school years 1999 and 2000.

Like teachers, administrator attrition rates peaked in school year 1995 due to the early retirement option. Since then, the rates have ranged from a low of 3.4% in school year 1997 to a current high of 5.3% in school year 2000. This represents a 56% increase in attrition rates for administrators since school year 1997. (See **Figure 9**.) If this trend continues, attrition will be about 6% in school year 2001 and will probably be between 7-8% in school year 2003.

Figure 9: Historical Administrator Attrition



Attrition rates for administrative positions ranged from a low of 4% for Junior High School Principals/Assistants to a high of 7% for District Superintendents/Assistants. However, as **Table 17** shows, the position with the highest number of administrators who left education were Elementary Principals and Assistants (n=2,631).

Table 17: Administrator Attrition Rates [FT]

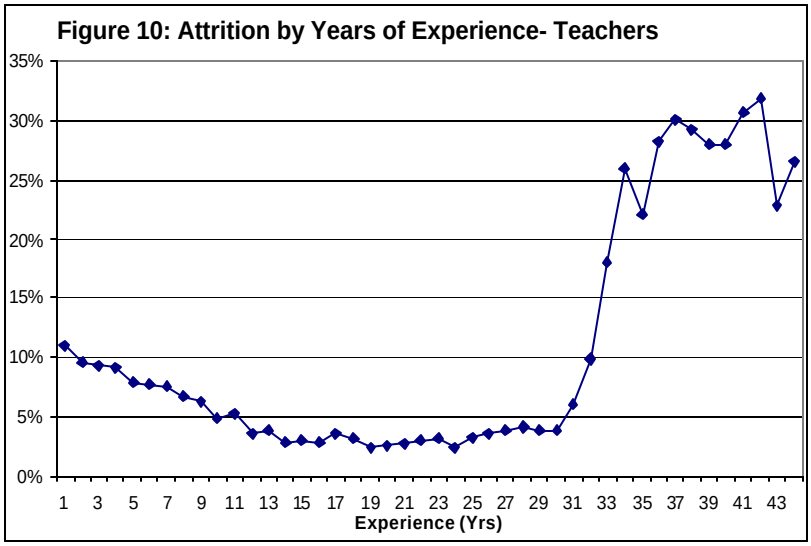
Position	Left Education		Total FT
	n	%	
District Supt./Asst.	82	7%	1,147
Elem Principal/Asst.	128	5%	2,631
HS Principal/Asst.	76	6%	1,380
Jr High Principal/Asst.	37	4%	897
Director/Asst.	51	5%	977
Other Admn.	52	5%	1,074
	426	**5.3%**	

Attrition by Years of Experience

Attrition rates also vary greatly by years of experience. As **Figures 10 and 11** indicate, the patterns of attrition by years of experience are very similar for both teachers and administrators. Both distributions show initially high attrition rates (for those with one year of experience) that soon

decrease to less than 5% for all experience levels up to about 31 years, after which the rates increase dramatically. The big difference between the two is that attrition rates for teachers remain relatively high for nine years, while those of administrators drop precipitously after two years of experience.

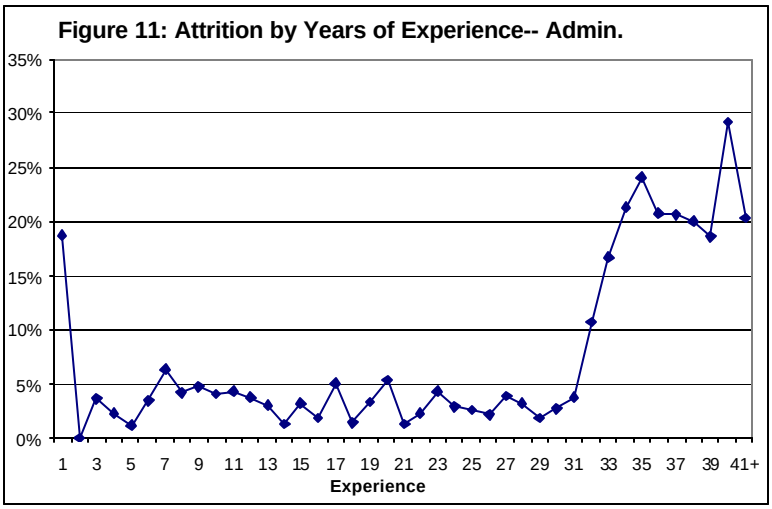
Teachers



Except for teachers with 33 years of experience or more, first-time teachers (i.e., those with one year of experience or less) leave teaching at the highest rate (11%). See **Figure 10**.

Teachers with less than five years of experience leave the profession at relatively high rates—between 9-11%. From five to eleven years of experience, the rates slowly decline from approximately 7.5- 5%. Then from 12 to 30 years of experience, the rate is very stable and substantially less than 5% (i.e., between 2.4% and 4.1%). At 31 years of experience, the rate at which teachers exit begins to rise dramatically and after 33 years, the attrition rates are extremely high—in the 20-33% range.

Administrators



As can be seen in **Figure 11**, attrition is very high for administrators with one year of experience or less (18.8%). Between two and 31 years of experience, however, administrators leave the profession at very low rates—between 1 and 5%.

Like that of teachers, administrator exit rates begin to rise dramatically at 31 years of experience and are extremely high after 33 years (in the 20-30% range).

Experience Distributions for Teachers and Administrators

As shown in **Figures12 and 13**, the years of experience distributions for full-time teachers and administrators are nearly mirror images. The majority of teachers have less than 12 years of experience while the majority of administrators have more than 25 years. This has grave implications for administrator demand in the near future.

There were 426 full-time administrators who left education in school year 2000. Based on current experience levels and attrition rates at each of those levels, that number is projected to increase 50%-- to 640 by school year 2003.

In contrast, there were 7,859 full-time teachers who left education in school year 2000, and that number is only expected to rise 11%, to 8,688 by school year 2003.

Figure 12: Years of Experience-- Teachers [00]

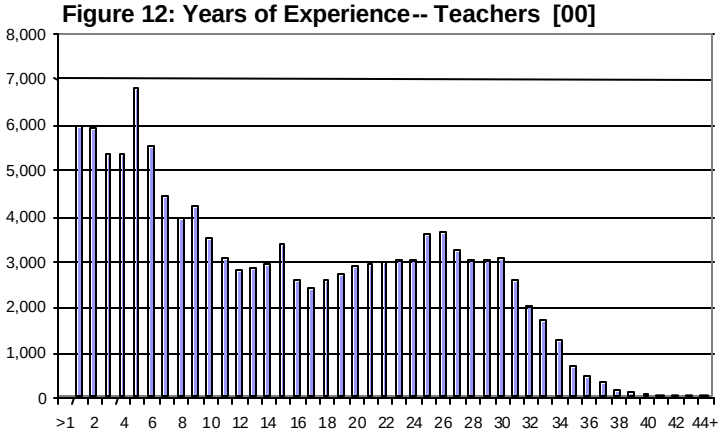
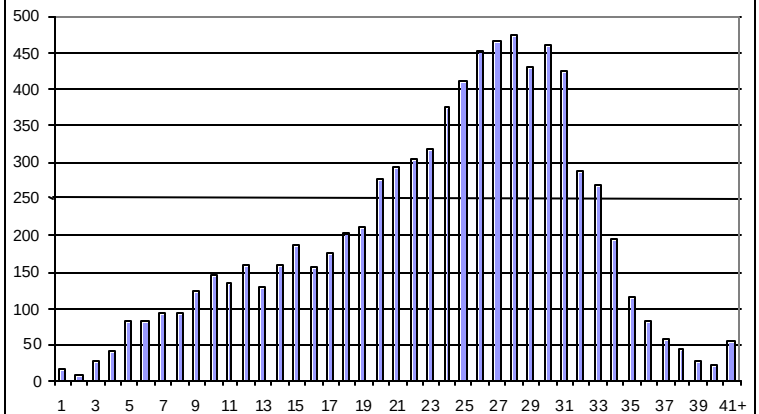


Figure 13: Years of Experience-- Administrators [00]



In summary:

- As the number of students in the Illinois public school system increases, so will the demand for educators. This increase over the next eight years (until school year 2008), will be especially apparent at the secondary level (16% increase or 87,256 students). At the elementary level, the enrollment will grow slightly through school year 2004 (2% or 27,589 students) and then begin to decline about 3,411 students by school year 2008.
- The average growth of teachers in the workforce has been about 2.3% a year from school year 1996 to school year 2000. In school year 2000, the rank of teachers grew by 3,300, or 2.6%. The number of administrators in the same period rose by 215, or 2.7%.
- In school year 2000, 11,352 new teachers (either first-time teachers or those re-entering the profession), were hired. In that same period, 2,060 positions went unfilled. Taken together, these numbers represent an 11% increase in demand for teachers from the previous year.
- Those teaching areas experiencing the highest demand (19% or greater) in this time period are Speech and Language Impaired, Cross Categorical, Multiply Handicapped, Behavior Disordered, and Bilingual Education.
- In school year 2000, 180 new administrators were hired; 73 positions went unfilled. Taken together, these numbers represent a 3% increase in demand for administrators from the previous year.
- Those administrative areas experiencing the highest demand in this time period include Assistant Elementary Principal (18% increase), and Assistant Junior High Principal (12% increase).
- Currently, nearly 16% of the teaching force is eligible to retire (i.e., 55 years old with 20 years of experience or more).
- Based on the growth over the next seven years in the number of teachers who will attain age 55 with 20 years of experience, the percentage of teachers eligible to retire will increase

substantially in the next three years (40%) and plateau for several years before starting to decline in school year 2007.

- There were 19,237 teachers eligible to retire in school year 2000. The areas with the largest number eligible to retire were: Self-Contained Classroom (7,201), Special Education (2,262), English Language Arts (1,670), Science (999), and Social Science (983).
- Overall, 15% of the teaching workforce was eligible to retire. Areas with 20% or more of their workforce eligible to retire include: Driver Education (26%), Industrial Occupations (21%), Business (21%), Other Foreign Language (21%), English as a Second Language (21%), Title I (20%), and Chemistry (20%).
- Currently, 24% of administrators are eligible to retire (i.e., age 55 years old with 20 years of experience or more); however, 60% of all administrators are 50 years old or older.
- Based on the growth over the next seven years in the number of administrators who will attain age 55 with 20 years of experience, the percentage of administrators eligible to retire will increase substantially in the next three years (47%).
- In addition, 27% of other certified staff (e.g., library/media) and 24% of school service personnel (e.g., school nurse), are currently eligible to retire.
- There were 426 full-time administrators who left education in school year 2000. Based on current experience levels and attrition rates, that number is projected to increase 50%-- to 640 by school year 2003.
- In contrast, there were 7,859 full-time teachers who left education in school year 2000, and that number is only expected to rise 11%, to 8,688 by school year 2003.

IV. Comparing Supply and Demand: Shortage Areas

This chapter presents information on the relative over- and under-supply of teachers and administrators in Illinois public schools. The first section provides data on unfilled positions in the schools. The second section compares new supply and new demand data for various positions and identifies areas of shortage.

Unfilled Positions

Each year the Illinois State Board of Education collects information from school districts on positions not filled as of December 1. The last such survey was completed for unfilled positions as of December 1, 1999. In conjunction with a survey on mentoring programs, school districts were again surveyed for unfilled positions as of September 1, 2000. Unfilled positions refer to positions that were budgeted by districts for the school year but were not filled because of reasons such as the lack of qualified applicants.

Table 18 shows the results of the 2000 unfilled position survey. As of September 1, 2000, Illinois public schools reported that there were 2,637 unfilled positions. Most unfilled positions were for library/media specialists, guidance counselors, standard elementary instructors, teachers in mathematics, music, physical education, and science, and most areas of special education, including cross categorical, speech and language impaired, and learning disabled. There were also 17 elementary principal and 14 secondary principal positions unfilled.

Unfilled positions are perhaps the best indicators of regional shortages. Between December 1, 1999 and September 1, 2000, the total unfilled positions in Illinois public schools increased by 3, from 2,634 to 2,637. In terms of regional distribution, however, half (1,308 or 50%) of the unfilled positions were in the City of Chicago School District #299. There were 761 unfilled positions in the suburban districts (Cook County and the collar counties) and 568 unfilled positions in the remaining districts.

Of particular concern is the rate at which the number of unfilled positions is growing. Over the last four years, the total number of unfilled positions has increased 90%, from a low of 1,387 in 1996 to a high of 2,637 in September, 2000. If this trend continues, the number of unfilled positions could exceed 5,000 in 2004.

Table 18: Number of Unfilled Positions/Vacancies in September 2000

in Full-Time Equivalents (FTE)

	Elementary (K-8)	Secondary (9-12)	Total FTE
Administrative			
Elem. Principal			16.50
Elem. Asst. Principal			26.50
Secondary Principal			14.00
Secondary Asst. Principal			15.50
Other Admin.			42.50
Other Certified Staff			
Adult Education			8.00
Librarian/Media Specialist			102.38
Therapist (Phys./Occupational)			8.25
Guidance Counselor			111.75
Psychologist			37.15
Social Worker			29.63
Instructional Staff			
Prekindergarten			31.00
Kindergarten			52.65
Standard Elementary Instructor			453.00
Vocational/Technical Education			
Agriculture			4.00
Business, Marketing, and Mgt.			36.16
Family and Consumer Sciences			15.83
Industrial			46.80
Cooperative Vocational Educ.			5.50
Instructional Areas			
Art	51.05	12.10	63.15
Bilingual Education	66.00	17.30	83.30
Computer Literacy/Technology	30.00	20.90	50.90
English as a Second Language	11.50	2.40	13.90
English/Language Arts	14.60	72.40	87.00
Foreign Language	17.97	58.00	75.97
Gifted	7.40	0.30	7.70
Health Education	3.60	10.70	14.33
Mathematics	34.80	77.20	112.03
Music (instrumental/vocal)	79.63	17.30	96.93
Physical Education	59.30	44.10	103.44
Reading	42.15	10.10	52.25
Science – Chemistry	2.10	11.10	13.20
Science – Physics	1.60	6.00	7.60
Science – Other	22.00	56.70	78.70
Social Studies/History	4.00	53.00	57.00
Special Education			
Speech and Language Impaired	83.58	11.85	95.43
Behavior Disordered	38.83	22.35	61.18
Learning Disabled	108.70	45.00	153.70
Cross Categorical	160.10	78.90	239.00
Other Special Education	69.90	43.10	113.00
Total *All* Unfilled Positions			**2636.81**

New Supply vs. New Demand: Shortage Areas

This section presents information on the relative new supply of and new demand for various positions (subjects) with the goal of identifying shortage areas. For the purpose of this particular discussion, new supply and new demand are defined very narrowly, focusing only on newly prepared personnel (new supply) and the personnel needed (new demand) for one year, as follows.

New Supply is defined as the number of individuals who received certification in the prior year (1999).

New Demand is defined as the sum of the educators hired for the first time, plus unfilled positions.

Re-entries and educators retained were taken out of the equation because they represent both supply and demand.

The New Supply/New Demand ratio in **Appendix I** provides an indication of the supply in relation to demand for the various positions or assignments. For each position (or assignment) in the table, the ratio shows the number of candidates (new supply) available for each vacancy (new demand). For example, for mathematics teachers, there were about two candidates for each vacancy (new supply=779 and new demand=404). It is assumed that positions (or assignments) with low new supply/new demand ratios reflect areas of shortage.

Areas of extreme shortage, where new demand exceeds new supply, are listed on the next page. The new demand/new supply ratios for these subjects are all less than one. For example, for physically handicapped teachers, the new supply was 46, while the new demand was 288, resulting in a new supply/new demand ratio of 0.16.

Areas of shortage include subjects where new demand may be less than new supply, but the new supply/new demand ratio is less than 3. For example, for mathematics teachers, as mentioned above, the ratio was 1.93, or about 2 teachers prepared (new supply) for every teacher needed (new demand). A supply of three educators for every position may seem like an over-supply, however, all of those educators may not be willing to teach in an Illinois public school. The new supply of educators is also available to fill demand in private schools, schools in other states, and demand in other occupations.

NOTE: the reader is reminded that the demand figures presented here only represents need in Illinois public schools.

Areas of extreme shortage and shortage are shown below.

Extreme Shortage	S/D Ratio
Physically Handicapped*	0.16
Health Occupations*	0.60
Library/Media	0.66
Speech and Language Impaired*	0.72
Blind and Partially Seeing*	0.81

Shortage	S/D Ratio
Deaf and Hard Of Hearing*	1.04
Earth Science*	1.07
Psychologist	1.14
Special Education (All)	1.22
Biology*	1.43
Guidance Counselors	1.52
Physical Education	1.59
Learning Disabilities*	1.60
Social Worker	1.68
Industrial Occupations*	1.75
Mathematics	1.93
Self-Contained Elementary	1.98
Fine Arts	2.03
TMH*	2.21
Nurse	2.24
Science (All subjects)	2.39
General Science*	2.41
Behavior Disordered*	2.48
Bilingual*	2.84
Principals/Superintendents	NA

* Supply was estimated

Clearly, new supply exceeds new demand for mathematics teachers. But this does not necessarily mean that there is no shortage for mathematics teachers. As shown in **Table 18**, in September 2000, there were 112 mathematics teaching positions that were not filled in Illinois public schools. It seems reasonable to conclude that the data on mathematics teachers reflect, not only a lack of supply, but also a recruitment/retention problem in Illinois public schools. As mentioned in Chapter 2, not all individuals trained as mathematics teachers may choose to become teachers in Illinois public schools; many may teach in private schools, in schools out of state, or work in the business or private sector. This scenario may also apply to other "shortage" positions (assignments). Thus, there is not only a need to produce more educators in the shortage areas but also a need to put more effort in the areas of recruitment and retention.

Appendix I shows administrators (as a group) with a new supply/new demand ratio of 15.53, but this does not necessarily mean there is not a shortage of certain categories of administrators, such as principals and superintendents. The administrator supply data cannot be disaggregated by position hence, it was not possible to include them in **Appendix I**. Based on the unfilled position survey (**Table 18**) and other reports (Ahmed-Ullah, 2000), principals and superintendents are included in the shortage list, although a supply/demand index could not be computed for these positions.

NOTE ON SUPPLY: In this discussion, new supply does not include the "reserve pool" or individuals who possess the qualifications but are not currently employed. Estimates of the reserve pool have often been inaccurate for various reasons. It is also conceivable that some newly qualified individuals may actually join the "reserve pool." Hence, the exclusion of the reserve pool from this discussion may not necessarily underestimate new supply to the extent generally assumed.

In summary:

- Many Illinois districts are unable to fill positions for various reasons, including the shortage of educators qualified or willing to fill these positions. In September 2000, there were 2,637 unfilled positions reported.

- Most unfilled positions were for library/media specialists, guidance counselors, standard elementary instructors, teachers of mathematics, music, physical education, and science, and most areas of special education, including cross categorical, speech and language impaired, and learning disabled. There were also 17 elementary principal and 14 secondary principal positions unfilled.

- Half (1,308) of the unfilled positions were in the City of Chicago School District #299.

- For most positions (assignments), the new supply for educators exceeds new demand by the public schools. Yet there is a shortage for educators in many positions (assignments) because of the competition from private schools, schools out of state, and the business/private sector for individuals trained as teachers.

- There is a need to produce more educators in the shortage areas; and there is also a need to put more effort into recruitment and retention in Illinois public schools.

V. Projections of Likely High Demand Areas

This section discusses those educational positions that are likely to be in high demand in the next three years. High demand is defined as those educational positions that have the greatest need for staff – either individuals changing positions in the district or those hired to fill positions created due to growth. To determine which educational positions are expected to be high demand areas, two averages were calculated – the average increase in educational personnel over the last five years and the average percentage of teachers returning to the same position for the next school year (i.e., percentage retained) for the last four years. Given that the average is, by definition, the expected value of a statistic, these averages were used to project total educational staff and the percentage of retained staff for school years 2001, 2002, and 2003.

To determine the need for specific positions, the percentage of the total number of staff that each position/assignment represents was calculated for the 2000 school year. It is assumed that these percentages are stable across time.

Once the expected number of staff for each position was calculated, retention rates were applied to these figures to obtain an estimate of the number of positions requiring additional staff. These calculations were performed for school years 2001, 2002, and 2003 and the results were summed. The sum was then compared to current staffing levels for each position and the percentage of needed positions over current staffing levels was calculated. The percentage of needed positions was then rank ordered from highest to lowest. These analyses were performed twice – once for those educators classified as full-time and again for all educational staff (both full- and part-time positions. Calculations for all educational staff (full- and part-time positions) are presented in **Table 19**. For comparison purposes, the totals for just the full-time positions are also included.

It is estimated that by school year 2003, the educator workforce will grow by a total of 11,370 positions. Because this increase represents growth in total headcount across both full- and part-time positions, most of these positions will need to be filled by newly hired individuals. If only full-time positions are examined, and the number of positions to be filled due to staff replacement is taken into consideration, the number of full-time positions to be filled by school year 2003 rises to 56,348 (an average of about 18,783 over each of the next three years). While that number seems high, it should be noted that with an average retention rate of 88% and approximately 145,000 full-time educators in 2000, one would expect over 17,000 positions would need to be filled in 2001. However, not all of those positions will be filled by new hires. Some of these positions would be filled by current staff changing positions.

Of the full-time positions that will need to be filled in the future, self-contained classroom positions account for 20.8% of the total. Positions teaching learning disabled children will account for an additional 9.2% of the total.

However, the educational staff working in Illinois public schools is comprised of both full- and part-time positions. Taking the number of positions to be filled due to staff replacement into consideration, the number of all positions (full- and part-time) to be filled by school year 2003 rises to 72,594. Self-contained classroom positions will account for 23.8% of the positions to be filled and English/language arts will add another 6.6 percentage points. While these main assignments represent the largest number of teachers to Illinois education personnel, the need for staff in other assignments will be far greater.

Table 19: Projected Number of Educational Staff for School Year 2003 and Projected Demand by Position and Assignment

	Total Number of Educators, 2000	Projected Number of Educators, 2003	Number of Positions Needed Over 2000 (Not Retained + Headcount Growth)	Percentage of Positions Needed Over 2000
Administrative Staff				
District Superintendent/Asst. Supt.	1,234	1,327	430	34.8
Director	1,041	1,120	595	57.2
High School Principal	1,428	1,536	723	50.6
Junior High Principal	970	1,043	550	56.7
Elementary Principal/Asst. Principal	2,700	2,904	1,183	43.8
Other Administration	930	1,000	624	67.1
School Service Personnel				
Guidance Counselor	2,930	3,151	996	34.0
Psychologist	1,565	1,683	623	39.8
Nurse	1,032	1,110	351	34.0
Social Worker	2,588	2,783	1,126	43.5
Other Certified Staff				
Consultant	793	853	786	99.1
Coordinator	1,894	2,037	1,563	82.5
Library/Media Specialist	1,981	2,130	721	36.4
Teachers				
Art	2,847	3,062	1,196	42.0
At-Risk	1,359	1,462	922	67.8
Bilingual Education	2,108	2,267	1,650	78.3
Computer Education/Technology	1,158	1,245	874	75.5
Driver Education	627	674	191	30.5
English as a Second Language	614	660	409	66.6
English/Language Arts	10,034	10,791	4,550	45.3
Foreign Language (Other than Spanish)	921	990	411	44.6
Foreign Language - Spanish	1,926	2,071	991	51.5

Table 19 (con't.)

	Total Number of Educators, 2000	Projected Number of Educators, 2003	Number of Positions Needed Over 2000 (Not Retained + Headcount Growth)	Percentage of Positions Needed Over 2000
Teachers cont.				
Gifted	750	807	493	65.7
Learning Resource	435	468	285	65.5
Health Education	596	641	311	52.2
Mathematics	6,866	7,384	2,882	42.0
Music (instrumental/vocal)	4,244	4,564	1,794	42.3
Physical Education	7,065	7,598	2,423	34.3
Reading Improvement	940	1,011	825	87.8
Science - Biology	1,490	1,602	694	46.6
Science - Chemistry	822	884	398	48.4
Science - Earth Science	287	309	142	49.5
Science – General	2,676	2,878	1,420	53.1
Science - Physical Science	332	357	207	62.3
Science - Physics	388	417	201	51.8
Science – Other	326	351	230	70.6
Self-Contained Classroom	42,414	45,613	17,281	40.7
Social Science	5,689	6,118	2,424	42.6
Title I	3,533	3,800	2,428	68.7
Other Assignments	1,983	2,133	2,272	114.6
Special Education - Speech and Lang. Impair.	2,852	3,067	1,214	42.6
Special Education - Behavior Disordered	2,246	2,415	1,481	65.9
Special Education - Cross Categorical	3,373	3,627	2,567	76.1
Special Education - Other	6,002	6,455	3,183	53.0
Vocational Technical Education				
Business, Marketing and Management	1,412	1,519	590	41.8
Family and Consumer Science	1,301	1,399	498	38.3
Health Occupations	89	96	57	64.0
Industrial Occupations	1,699	1,827	577	34.0
Vocational Education	340	366	213	62.6
ALL EDUCATORS				
Total **Full-Time** Positions Only	145,068	157,136	56,384	
Total **Full- and Part-Time** Positions	150,190	161,560	72,594	

Likely High Demand Areas

It should be noted that there will be an increase in demand for all of the positions listed in **Table 19**. Existing staff will fill most of this demand by changing positions. If highest demand for specific positions is defined as those positions requiring more than a 65 percentage point increase over current staffing levels and those educational positions that do not identify specific areas (e.g., Other Assignments, Consultant, Coordinator), are excluded, ten areas of likely high demand become apparent. These areas are listed below.

All Educational Staff
• Reading Improvement (*Highest)* • Bilingual Education • Cross Categorical • Computer Education/Technology • Title I • At-Risk • English as a Second Language • Behavior Disordered • Gifted • Learning Resource

It should be noted that using the retention methodology delineated in this section is but one option for determining projections. In the future, simulations will be performed to determine the most accurate and appropriate method to determine likely high demand areas.

In summary:

- It is estimated that over 56,000 full-time positions will need to be filled over the next three school years

- It is projected that almost 72,600 full- and part-time positions will need to be filled over the next three school years.

- Full- and part-time reading improvement teachers are projected to be in greatest demand in school year 2003. Other high demand areas include bilingual education, cross categorical, and computer education/technology.

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Definition of Terms

SUPPLY

Endorsements: A credential on a certificate indicating the educator has met the minimum requirements for that assignment. These counts may be duplicates as one person can hold an unlimited number of certificates or endorsements.

New Supply: The number of newly certified individuals in a fiscal year (July 1 to June 30).

Pipeline: A source of future educator supply consisting of students enrolled in professional preparation programs in Illinois and current program completers who have not yet received certification.

Program Completer: In Illinois, a person who has met all the requirements of a state-approved teacher preparation program. Program requirements vary widely between certificates and between endorsement areas.

DEMAND

Attrition: An educator who was employed in an Illinois public school in the previous year but not in the current year.

Demand: The total number of funded positions (i.e., total employed + unfilled positions). Total employed = {New educators hired + Retained}

New Demand: **= {First-Timers + Unfilled Positions}**

Is compared with new supply to determine shortage areas. [**NOTE:** Educators retained from the previous year and re-entries are on both sides of the supply-demand equation, thus they cancel out.

Educator: For the purposes of this study, educators are personnel employed in Illinois public schools in one of the following four categories: administrators, teachers, school service personnel, or other certified staff.

Eligible to Retire: An educator who is at least 55 years old and has 20 years of experience or more.

Full-Time: An indicator of educator status defined by two TSR fields: Months Employed and Percent-Time Employed. The definition for full-time status is: {Months > 8 and Percent time >99%}.

First Time: A newly hired educator with one year of experience or less. This status is calculated from the TSR data field "total years experience." The definition is: {experience is less than or equal to one year}.

Re-entry: A newly hired educator who has more than one year of teaching experience but was not employed in an Illinois public school the prior year.

Retention: An educator who was employed in both the previous and current year. In order to reduce confusion, both part-time and full-time personnel are included in the calculation (e.g., a part-timer could be retained the next year as a full-timer).

Total New Positions: = {Number of "Re-entries" + Number of "Beginners"}

Unfilled Positions: Number of positions (in full-time equivalent) reported unfilled as of December 1 by each Illinois public school district on the Unfilled Positions Survey.

APPENDICES

Appendix A: Retention Rates by Subject Area- 1999-2000

Main Assignment	Total Retained in 2000 [FT+PT]
ART	91%
AT-RISK	85%
BILINGUAL EDUC	80%
COMPUTER EDUC	83%
DRIVER EDUCATION	91%
ENGLISH	88%
ENGLISH AS 2ND LANGUAGE	83%
FOREIGN LANGUAGE--OTHER	85%
FOREIGN LANGUAGE--SPANISH	88%
GIFTED EDUCATION	86%
HEALTH EDUCATION	86%
LEARNING RESOURCE	80%
MATHEMATICS	89%
MUSIC	91%
PHYSICAL EDUCATION	92%
READING IMPROVEMENT	83%
SELF-CONTAINED	89%
SOCIAL SCIENCE	89%
SPECIAL EDUCATION	90%
TITLE1-READ and MATH	77%
Z-OTHER	63%
Science	
BIOLOGY	86%
CHEMISTRY	86%
EARTH SCIENCE	83%
GENERAL SCIENCE	86%
OTHER SCIENCE	82%
PHYSICAL SCIENCE	82%
PHYSICS	86%
Vocational Technical	
AGRICULTURE	93%
BUSINESS	85%
FAMILY and CONSUMER SCI	91%
HEALTH OCCUPATION	83%
INDUSTRIAL	91%
VOCATIONAL TECHN MISC	78%
ALL	88%

Appendix B: FY 1999 New Certificate Counts

	#-of Individuals	Endorsement Description	#-of Endorsements
Special Education	**2,242**		**3,186**
		Blind and Partially Seeing	23
		Deaf and Hard Of Hearing	63
		Educable Mentally Handicapped	495
		Learning Disabilities	1,147
		Physically Handicapped	66
		Social/Emotional Disorders	869
		Speech and Language Impaired	346
		Trainable Mentally Handicapped	177
Science	**1,053**		**2,009**
		Biology	279
		Chemistry	311
		Earth Science	51
		General Science	877
		Physical Science	288
		Physics	203
English Language Arts	**3,083**		**3,814**
		English	988
		Journalism	61
		Language Arts	2,341
		Reading	243
		Speech	181
Social Science	**3,377**		**4,756**
		Civics/Political Science	479
		Economics	199
		Geography	214
		History	415
		Psychology	164
		Social Science	2,969
		Sociology	316
Fine Arts	**873**		**893**
		Art	409
		Dance	8
		Music	420
		Theatre and Drama	56
School Service Personnel	**751**		**752**
		Guidance	198
		School Nurse	85
		School Psychologist	145
		School Social Worker	324

Appendix C: Change in Demand by Main Assignment

Main Assignment	Employed 1999	Demand 2000		Change from 1999	
		Vacancies Filled	Unfilled Positions		
Art	2,429	197	25	222	9%
At-Risk / Pre-K	1,188	121	56	177	15%
Bilingual Education	1,955	344	20	364	19%
Computer/Technology	1,043	83	27	110	11%
Consumer Education	137	17	0	17	12%
Driver Education	615	10	0	10	2%
Early Childhood	988	122	22	144	15%
English as a Second Language	514	75	15	90	17%
English Language Arts	10,142	955	38	993	10%
Foreign Language-- Spanish	1,614	212	31	243	15%
Foreign Language--Other	768	66	16	82	11%
Gifted Education	604	40	2	42	7%
Health Education	539	42	0	42	8%
Learning/Resource Center Library	413	24	3	27	7%
Music	3,659	351	62	413	11%
Physical Education	6,650	450	208	658	10%
Self-Contained	40,962	3,604	487	4,091	10%
Social Science	5,469	415	8	423	8%
Title I	3,479	265	5	270	8%
Z - Other Subj/Pgm Not Listed	1,906	289	125	414	22%
Mathematics	**6,483**	**578**	**42**	**620**	**10%**
Algebra	1,937	165	5	170	9%
Basic and/or General Math	2,947	277	10	287	10%
Business Math	80	10	0	10	13%
Geometry	532	30	1	31	6%
Non Title 1 Remedial Math	20	2	0	2	10%
Other Math	888	89	27	116	13%
Trigonometry	79	5	0	5	6%
Science	**6,034**	**586**	**50**	**636**	**11%**
Biology	1,444	140	15	155	11%
Chemistry	789	61	8	69	9%
Earth Science	287	30	4	34	12%
General Science	2,522	264	19	283	11%
Other Science	293	41	0	41	14%
Physical Science	323	27	0	27	8%
Physics	376	23	5	28	7%
Special Education	**18,838**	**2,186**	**760**	**2,946**	**16%**
Adapted P.E.	115	15	4	19	17%
Behavior Disordered	2,167	297	108	405	19%
Cross Categorical	3,065	367	238	605	20%
Deaf	325	26	1	27	8%
Educationally Handicapped	87	6	0	6	7%
EMH	1,195	98	29	127	11%
Hard of Hearing	262	29	17	46	17%
Homebound/Hospital	12	0	1	1	8%
Learning Disabled	6,799	737	134	871	13%
Multiply Handicapped	179	25	9	34	19%

Appendix C cont.

Main Assignment	Employed 1999	Demand 2000			
		Vacancies Filled	Unfilled Positions	Change from 1999	
Special Education cont.					
Other/General Special Education	960	121	15	136	14%
Physically Handicapped	275	15	17	32	12%
Severe/Profound Mentally Handicap	209	16	9	25	12%
Speech and Language Impaired	2,212	338	148	486	22%
TMH	755	73	22	95	13%
Visually Impaired	221	23	8	31	14%
Vocational Technical Education	**4,726**	**320**	**61**	**381**	**8%**
Agriculture	297	26	1	27	9%
Business, Marketing, Management	1,370	90	24	114	8%
Family and Consumer Sciences	1,118	85	13	98	9%
Health Occupations	64	6	1	7	11%
Industrial Occupations	1,541	95	20	115	7%
Vocational Technical Misc.	336	18	2	20	6%
	121,179	**11,352**	**2,060**	**13,412**	**11.1%**

Appendix D: 2000 Eligible to Retire by Position [FT]

Position	Eligible to Retire		Total Employed
Administrative Staff	**n**	**%**	
Regional Supt.	26	58%	45
Asst. Regional Supt.	14	29%	48
District Supt.	298	35%	856
Admin Assistant	26	18%	142
Asst. District Supt.	100	31%	327
Business Manager	42	25%	167
Elem Princ	589	26%	2,278
Asst Elem Princ	64	16%	399
Jr High Princ	110	19%	577
Asst. Jr. High Princ	52	13%	388
HS Princ	189	26%	728
Asst HS Princ	157	23%	690
Jr High Dean	12	9%	128
Sr High Dean	68	15%	469
Director	242	26%	935
Deputy Supt.	2	18%	11
Other Admin	4	67%	6
Associate Supt.	13	32%	41
Assistant Director	15	19%	80
	2,023	**24%**	**8,315**
Instructional Staff	**n**	**%**	
Spec Ed Teacher (all)	2,262	11%	20,639
Elem Teacher	9,365	17%	56,312
Jr/Middle Teacher	2,410	14%	17,218
HS Teacher	5,200	17%	30,110
	19,237	**15%**	**124,279**
Other Certified Staff	**n**	**%**	
Adult Education	21	25%	83
Attendance Officer	8	19%	43
Audiologist	2	33%	6
Consultant	193	25%	766
Coordinator	444	25%	1,796
Diagnostician	4	9%	43
Library/Media Specialist	613	32%	1,935
Occupational Therapist	-	0.0%	33
Physical Therapist	6	30%	20
Supervisor	114	22%	517
	1,405	**27%**	**5,242**
School Service Personnel	**n**	**%**	
Guidance Counselor	849	30%	2,840
Intern Psychologist	-	0.0%	12
Intern Soc Worker	1	25%	4
Nurse	306	33%	926
Psychologist	257	19%	1,366
Social Worker	358	15%	2,318
	1,771	**24%**	**7,466**
ALL (2000)	**24,436**	**16.8%**	**145,304**

Appendix E: 2000 Eligible to Retire by Assignment [FT]

Main Assignment	Elementary		Middle/Jr.		Secondary		Total Eligible	
ART	134	12%	84	17%	151	16%	369	15%
AT-RISK	145	11%	-	0%	-	0%	145	11%
BILINGUAL EDUC	178	10%	11	10%	31	17%	220	11%
COMPUTER EDUC	46	16%	53	15%	82	18%	181	16%
DRIVER EDUC	-	0%	-	0%	158	26%	158	26%
ENGLISH LANG. ARTS	98	15%	602	15%	970	19%	1,670	17%
ENGLISH AS 2ND LANGUAGE	71	23%	16	21%	29	18%	116	21%
FOREIGN LANG-- OTHER	17	24%	21	16%	125	21%	163	21%
FOREIGN LANG-- SPANISH	6	7%	39	13%	186	14%	231	13%
GIFTED EDUCATION	100	20%	21	16%	5	19%	126	19%
HEALTH EDUCATION	2	11%	14	7%	21	6%	37	6%
LEARNING RESOURCES/MEDIA	59	21%	18	25%	11	20%	88	21%
MATHEMATICS	34	13%	272	11%	615	15%	921	14%
MUSIC	252	14%	101	10%	99	10%	452	12%
PHYSICAL EDUCATION	274	12%	170	11%	395	14%	839	12%
READING IMPROVEMENT	105	15%	15	21%	12	33%	132	16%
SELF-CONTAINED	7,038	17%	159	13%	4	21%	7,201	17%
SOCIAL SCIENCE	25	14%	367	18%	591	18%	983	18%
TITLE1-READING and MATH	604	20%	26	14%	40	19%	670	20%
Z-OTHER	117	11%	22	14%	184	29%	323	15%
SCIENCE								
BIOLOGY	-	0%	4	8%	257	18%	261	18%
CHEMISTRY	-	0%	3	100%	160	20%	163	20%
EARTH SCIENCE	-	0%	10	13%	28	14%	38	14%
GENERAL SCIENCE	45	20%	263	14%	75	15%	383	15%
OTHER SCIENCE	12	16%	7	9%	31	19%	50	16%
PHYSICAL SCIENCE	-	0%	8	15%	32	12%	40	12%
PHYSICS	-	0%	1	0%	63	17%	64	17%
VOCATIONAL TECHNICAL								
AGRICULTURE	-	0%	1	0%	32	10%	33	11%
BUSINESS	-	0%	10	29%	275	21%	285	21%
FAMILY and CONSUMER SCI	-	0%	42	15%	173	19%	215	19%
HEALTH OCCUPATIONS	-	0%	1	50%	14	21%	15	22%
INDUSTRIAL	1	25%	48	20%	286	22%	335	21%
VOCATIONAL TECH MISC	2	50%	1	25%	65	22%	68	22%
ALL	9,365	17%	2,410	14%	5,200	17%	16,975	18%
	All Levels							
SPECIAL EDUCATION	2,262	11%					19,237	15%

Appendix F: Projection of Eligible to Retire by Assignment

Main Assignment	Eligible to Retire 1999	Eligible to Retire 2000	PROJECTIONS* Eligible 01	PROJECTIONS* Eligible 02	PROJECTIONS* Eligible 03	3 Yr. Increase n	3 Yr. Increase %
ART	327	369	425	490	555	186	50%
AT-RISK	129	145	153	167	194	49	34%
BILINGUAL EDUC	191	220	231	247	270	50	23%
COMPUTER EDUC	168	181	220	259	280	99	55%
DRIVER EDUC	143	158	179	188	197	39	25%
ENGLISH LANG. ARTS	1,551	1,670	1,956	2,210	2,399	729	44%
ENGLISH AS 2ND LANGUAGE	105	116	126	142	151	35	30%
FOREIGN LANG-- OTHER	139	163	196	245	252	89	55%
FOREIGN LANG-- SPANISH	210	231	269	307	340	109	47%
GIFTED EDUCATION	120	126	146	171	176	50	40%
HEALTH EDUCATION	36	37	47	61	70	33	88%
LEARNING RESOURCES/MEDIA	89	88	108	127	143	55	63%
MATHEMATICS	870	921	1,055	1,281	1,414	493	54%
MUSIC	429	452	516	598	652	200	44%
PHYSICAL EDUCATION	763	839	1,028	1,187	1,292	453	54%
READING IMPROVEMENT	113	132	153	195	210	78	59%
SELF-CONTAINED	6,834	7,201	7,953	8,914	9,687	2,486	35%
SOCIAL SCIENCE	904	983	1,130	1,317	1,430	447	46%
TITLE1-READING and MATH	666	670	733	799	860	190	28%
Z-OTHER	257	323	357	409	523	200	62%
SCIENCE							
BIOLOGY	246	261	286	313	327	66	25%
CHEMISTRY	162	163	173	190	199	36	22%
EARTH SCIENCE	36	38	44	49	58	20	53%
GENERAL SCIENCE	339	383	444	509	533	150	39%
OTHER SCIENCE	50	50	60	65	65	15	30%
PHYSICAL SCIENCE	36	40	47	52	53	13	33%
PHYSICS	59	64	72	75	82	18	28%
VOCATIONAL TECHNICAL							
AGRICULTURE	22	33	39	45	49	16	48%
BUSINESS	290	285	345	387	408	123	43%
FAMILY and CONSUMER SCI	213	215	246	285	325	110	51%
HEALTH OCCUPATIONS	15	15	18	21	21	6	43%
INDUSTRIAL	307	335	383	432	471	136	41%
VOCATIONAL TECH MISC	65	68	87	93	105	37	55%
SPECIAL EDUCATION	2,081	2,262	2,558	2,901	3,199	937	41%
	17,965	19,237	21,784	24,730	26,992	7,755	40.3%

Appendix G: Projection of Eligible to Retire by Position

Position	Eligible to Retire		PROJECTIONS*			3 Yr. Increase	
Administrative	**1999**	**2000**	**Eligible 01**	**Eligible 02**	**Eligible 03**	**n**	**%**
Elementary Principal/Asst.	617	653	758	865	947	294	45%
District Supt./Asst.	345	398	475	562	598	200	50%
Secondary Principal/Asst.	286	346	390	444	492	146	42%
Junior High Principal/Asst.	131	162	208	241	271	109	67%
Director/Asst.	217	257	287	327	355	98	38%
Other Administrator	140	152	185	219	232	80	53%
Other Supt.	58	55	66	76	77	22	40%
	1,794	**2,023**	**2,369**	**2,733**	**2,973**	**950**	**47%**
Instructional							
Elem Teacher	8.866	9.365	10.328	11.586	12.605	3.240	35%
HS Teacher	2,146	5,200	6,019	6,871	7,357	2,157	41%
Jr/Middle Teacher	4,913	2,410	2,879	3,370	3,760	1,350	56%
Spec Ed Teacher (all)	2,081	2,262	2,558	2,903	3,200	938	41%
	18,006	**19,237**	**21,784**	**24,730**	**26,922**	**7,685**	**40%**
School Service Personnel							
Guidance Counselor	800	849	948	1.033	1.089	240	28%
Social Worker	329	358	402	434	464	106	30%
Psychologist	229	257	281	315	341	84	33%
Nurse	325	306	303	318	306	(0)	-
	1,683	**1,771**	**1,935**	**2,100**	**2,199**	**428**	**24%**
Other Certified Staff							
Library/Media Specialist	556	613	667	712	751	138	22%
Coordinator	392	444	511	570	614	170	38%
Consultant	261	193	197	227	251	58	30%
Supervisor	115	114	129	163	175	61	54%
Adult Education	n/a	21	22	29	31	10	49%
Attendance Officer	n/a	8	10	11	12	4	44%
Audiologist	n/a	2	2	3	2	0	-
Diagnostician	n/a	4	4	4	9	5	115%
Physical Therapist	n/a	6	7	6	6	(0)	-
	1,324	**1,405**	**1,549**	**1,725**	**1,850**	**445**	**32%**
TOTAL	**22,807**	**24,435**	**27,637**	**31,288**	**33,945**	**9,510**	**39%**

Appendix H: 2000 Attrition by Subject Area

	Employed 1999 [FT]	Attrition in 2000 [FT]	
ART	2,431	141	6%
AT-RISK	1,188	86	7%
BILINGUAL EDUC	1,955	195	10%
COMPUTER EDUC	1,043	67	6%
DRIVER EDUCATION	615	29	5%
ENGLISH AS 2ND LANGUAGE	515	38	7%
ENGLISH LANGUAGE ARTS	9,407	639	7%
FOREIGN LANGUAGE--OTHER	768	65	8%
FOREIGN LANGUAGE--SPANISH	1,615	115	7%
GIFTED EDUCATION	604	35	6%
HEALTH EDUCATION	539	29	5%
LEARNING RESOURCE	413	26	6%
MATHEMATICS	6,483	397	6%
MUSIC	3,662	238	6%
PHYSICAL EDUCATION	6,650	320	5%
READING IMPROVEMENT	737	31	4%
SELF-CONTAINED	40,964	2,683	7%
SOCIAL SCIENCE	5,470	313	6%
SPECIAL EDUCATION	19,838	1,281	6%
TITLE1-READ and MATH	3,479	232	7%
Z-OTHER	2,040	178	9%
SCIENCE			
BIOLOGY	1,444	113	8%
CHEMISTRY	789	50	6%
EARTH SCIENCE	287	22	8%
GENERAL SCIENCE	2,522	165	7%
OTHER SCIENCE	293	14	5%
PHYSICAL SCIENCE	323	25	8%
PHYSICS	376	22	6%
VOCATIONAL TECHNICAL			
AGRICULTURE	297	14	5%
BUSINESS	1,371	97	7%
FAMILY and CONSUMER SCI	1,120	69	6%
HEALTH OCCUPATION	64	8	13%
INDUSTRIAL	1,541	95	6%
VOCATIONAL TECHNICAL MISC	336	27	8%
ALL	**121,179**	**7,859**	**6.5%**

Appendix I: 2000 Supply vs. Demand

Certificate Description	Supply: Individuals certified in 1999	Demand: First-Timers Hired	Demand: Unfilled Positions	Demand: Total	S - D	Ratio [S/D]
Administrative	1,393	17	73	90	1,303	15.53
Guidance Counselors	198	31	99	130	68	1.52
Library/media	77	36	81	117	**-40**	**-0.66**
Nurse	85	33	5	38	47	2.24
Psychologist	145	59	68	127	**18**	**1.14**
Social Worker	324	176	17	193	131	1.68
Instructional						
Bilingual	540	170	20	190	350	2.84
Early Childhood	723	59	22	81	642	8.93
English Language Arts	2,866	586	15	601	2,265	4.77
Fine Arts	790	299	90	389	401	2.03
Health Education	192	24	0	24	168	7.87
Mathematics	779	362	42	404	375	1.93
Physical Education	799	294	208	502	297	1.59
Science (All)	1,012	374	50	424	588	2.39
Self Contained Elementary	5,546	2,308	487	2,795	2,751	1.98
Social Science	3,216	258	8	266	2,950	12.09
Special Education	2,244	1,079	760	1,839	405	1.22
Voc. Tech. (estimates)*						
Agriculture	156	19	1	20	136	7.80
Business	850	54	16	70	781	12.23
Family and Consumer Sci	242	43	10	53	189	4.55
Health Occupations	3	5	0	5	**-2**	**-0.60**
Industrial Occupations	133	49	27	76	57	1.75
Science (estimates)*						
Biology	146	87	15	102	44	1.43
Chemistry	163	35	8	43	120	3.77
Earth Science	27	21	4	25	**2**	**1.07**
General Science	460	172	19	191	269	2.41
Physical Science	151	16	0	16	135	9.43
Physics	106	17	5	22	85	4.95
Special Ed (estimates)*						
Behavior Disordered	612	139	108	247	365	2.48
Blind and Partially Seeing	16	12	8	20	**-4**	**-0.81**
Deaf and Hard Of Hearing	44	26	17	43	**2**	**1.04**
EMH	348	43	29	72	276	4.84
Learning Disabilities	807	371	134	505	302	1.60
Physically Handicapped	46	271	17	288	**-242**	**-0.16**
Speech and Language	243	191	148	339	**-96**	**-0.72**
TMH	125	34	22	56	68	2.21

* The supply numbers for theses subjects were estimated from the number of endorsements.