



Educator Supply and Demand in Illinois

2001 Annual Report

Illinois State Board of Education

Ronald J. Gidwitz, Chairman
State Board of Education

Ernest R. Wish
State Superintendent of Education
and Chief Executive Officer

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 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. We would like to recognize the contributions of Dr. Richard Yong and Dr. Shuwan Chiu, of the Research Division, to this report.

Questions concerning this report may be referred to Jim Sweeney (jsweeney@isbe.net), Principal Accountability Consultant, Research Division, Illinois State Board of Education, (217) 782-3950.

2001 Educator Supply and Demand in Illinois

Executive Summary

Illinois school districts will need to hire about 55,000 new teachers, including about 33,000 new first-time teachers, and 3,500 new administrators over the next four years, but unless the supply of educators vastly outpaces demand, there will not be enough high-quality candidates to give districts many choices.

The 2001 Educator Supply and Demand report draws a troubling picture for Illinois schools and mirrors a national trend. Demand outpaces the available supply partly because of early-career teacher flight, retirement, increasing competition for teacher candidates from other states and the private sector, and decreasing interest in education careers among young people.

Shrinking Pool. The problem goes far beyond ensuring there are enough teachers to fill the vacancies, however. The size of the teacher pool from which districts can select is shrinking. The quality of teachers in the classrooms suffers when districts have fewer choices and less opportunity to find the best-qualified candidates for their positions. Sometimes they have to “settle” for a teacher who is only partly qualified or who otherwise might not be the best match for the position.

More than 42,000 Illinois public school students faced the very real possibility that there would be no qualified teachers in their classrooms when the 2000-2001 school year began. Of the 2,637 unfilled vacancies in the fall of 2000, 2,225 were teaching positions. Half those vacancies were in the Chicago public schools, 28 percent were in the suburban districts of Cook, Lake, Kane, Dupage, McHenry and Will counties, and 22 percent were spread throughout the rest of the state. The remaining unfilled positions were principals and other administrators, counselors, nurses, social workers and other student support staff. Data on unfilled positions for the 2001-2002 school year are still being collected.

The competition for would-be teachers is growing significantly. Undergraduate enrollment in teacher preparation programs dropped by 10 percent last year. Even once they become teachers, many individuals are lured away immediately and others leave in their early years at alarming rates.

About half the new teachers produced in Illinois each year never make it into the state’s public school classrooms. Other states are offering financial incentives, including signing bonuses and housing allowances, to attract teachers. Private schools are a favorable option for some individuals. Business and industry recruit teachers as well, especially those in the areas of mathematics, science and computer science.

Attrition: Teacher Flight and Retirements. The overall rate at which teachers leave the profession has increased by 60 percent since 1996. While retirement accounts for about 23 percent of teacher attrition, more than 75 percent of teachers who leave do so for reasons other than retirement. Early-career flight, for example, is having a significant impact on the teaching force. Teachers with less than five years of experience leave the profession at relatively high rates – between 8% and 11% per year.

Related studies indicate that Illinois loses about 30% of its teachers in the first 3 years on the job. Although their specific reasons are not known, national data indicate that teachers leave because of low salaries, negative school environment and lack of induction and mentoring support.

Approximately 12 percent of teachers (15,000) were eligible to retire last school year (i.e., 55 or older with 20+ years of experience). Even though the total number of teachers is increasing, the proportion eligible to retire is expected to continue growing to about 16 percent (21,300) by 2004.

The teacher ranks are also the primary source for filling principal and other administrator vacancies. About 60 percent of annual administrator attrition is the result of retirement. Last school year, 25 percent of administrators were eligible to retire.

Growing Enrollment. The pressure on teacher and administrator demand will certainly increase with student enrollment projected to grow through 2008. Since 1996, student enrollment has advanced at about 1 percent annually, while the teaching force grew by about 2.4 percent and administrators increased by 2.6 percent. Even at those rates, the workforce is not growing fast enough to meet demand. School district reform efforts, such as class-size reductions, may further exacerbate the problem.

Geographic and Subject-Area Shortages. Even if an abundant supply of teachers were available, some parts of the state and some subject-matter areas would still experience shortages. Wide-ranging disparities in salaries and working conditions among school districts statewide contribute to those regional differences. At the same time, there were not enough special education, mathematics and physical education teachers to fill the need in 2000-2001.

Demographic Imbalances. The scales tip dramatically when the gender and racial distribution of educators is considered. Racial/ethnic minorities are underrepresented among teachers and administrators, while females dominate the teaching ranks and males are primarily administrators. Minority educators comprise just 15 percent of the teaching force (student enrollment is 40 percent minority statewide), 19 percent of principals and just 4 percent of superintendents. There are three female teachers for every male teacher, and 52 percent of principals and 86 percent of superintendents were male.

Bottom Line. The report concludes that

- Educator supply must exceed demand in order to ensure that adequate quantity and high quality exists within Illinois' teacher and administrator pools.
- Illinois must aggressively recruit qualified individuals into the teaching profession and retain them by providing induction and mentoring support during their early years, and improving compensation and working conditions, especially in poor urban and hard-to-staff schools.
- The educator workforce must become more diverse – more minority teachers and administrators, plus more male teachers and female administrators.

Educator Supply and Demand, 2001

I. Educators currently in Illinois public schools

In 2001, the Illinois public school system was served by **8,551** administrators, **127,323** teachers, **7,743** school service personnel (e.g., counselors, nurses, etc.), and **5,377** other certified staff (e.g., consultants, librarians, etc.)

Minorities are under-represented. Racial/ethnic 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 40%. Minorities formed 19% of the principals in Illinois public schools and 4% of the superintendents (see **Figure 1**).

Females dominate teaching; males dominate superintendent positions. Females dominated the overall teaching force while males dominated district leadership positions. There were three female teachers (76%) for every male teacher (24%); the imbalance is especially acute among elementary and special education teachers. Fifty-two percent of the principals and 86% of the superintendents were male (see **Figure 2**).

More minority educators, male teachers, and female district administrators are needed. Given what we know about the current quantity of minority educators in the workforce, more minority teachers and administrators need to be prepared and recruited into the public schools. More male elementary and special education teachers and female district administrators are also needed.

II. Supply—flat in recent years

Educator supply is comprised of personnel retained from the previous year, newly certificated personnel, re-entering personnel (i.e., newly hired educators who have prior experience) and students in the pipeline (i.e., those currently enrolled in professional preparation programs).

Undergraduate enrollments in professional education programs drop 10%. Generally, the number of newly certified teachers and administrators has remained fairly constant for the last four years. However, undergraduate enrollments in professional education programs dropped 10% between 2000 and 2001, which may signal trouble for the future supply of teachers (see **Table 1**).

Public schools face competition for educators. Illinois public schools must compete with various entities for the educators prepared by the colleges. Many teachers, especially in mathematics, science, and computer science, are lured into business and industry. Other states are drawing teachers away with financial incentives, such as generous signing bonuses and monetary offers for housing. Private schools also depend on the same teacher pool to staff their classrooms.

Blair (*Education Week*, February 21, 2001) reported that at least 29 governors had set teacher pay hikes as a priority for the year, while 28 state legislatures had introduced

bills aimed at increasing salaries. “The proposals tended to fall into three categories: across-the-board raises, performance-pay plans, and cash bonuses.”

Supply needs to exceed demand to ensure quality. With some 57 colleges producing educators, Illinois has always been considered an exporter of educators. But the recent increases in educator demand raise concerns. Previously, Illinois schools had a relatively large pool of candidates to fill vacancies. In recent years, school districts have complained (Klempen and Richetti, 2001) that they now have a much smaller pool of candidates. Fewer choices mean that school districts may have much more difficulty finding qualified teachers for their classrooms.

Need for strategies to recruit quality educators. There is an urgent need for strategies to recruit qualified educators into Illinois public schools. Teacher salary structures and working conditions merit special consideration. Illinois needs better information on the competition for teachers, so a study is needed to track a cohort from undergraduate enrollment through graduation, certification, and employment.

III. Demand—increasing dramatically

While supply has remained relatively stable, demand for teachers and administrators has increased dramatically. Two major factors determine the demand for new teachers: attrition (which includes retirement) and student enrollment.

Attrition is on the increase. Over the last four years, the rate at which teachers and administrators have been leaving Illinois public schools has increased dramatically (see **Figures 3 and 4**). Since 1996, the teacher attrition rate has increased by 60% (from 4.6% to 7.3%) and the administrator attrition rate has increased by 80% (from 3.4% to 6.2). If these trends continue, the demand for additional educators will increase accordingly. Between 2000 and 2001, 9,100 teachers and 518 administrators left education.

Early exits contribute to attrition increase for teachers. Teachers with less than five years of experience leave the profession at relatively high rates – between 8% and 11% per year. Related studies indicate that Illinois loses about 30% of its teachers in the first 3 years on the job. Although their specific reasons for leaving are unknown, national data indicate that teachers exit early in their careers due to low salaries, negative school environment and lack of induction and mentoring support.

Retirements are going to increase attrition further. Over 2,100 teachers and about 300 administrators who left Illinois public education had 31 or more years of experience. Thus, 23% of teacher attrition and nearly 60% of administrator attrition can be attributed to retirement. In 2001, over 15,000 teachers, or 12% of the workforce, were eligible to retire (i.e., 55 or older with 20 or more years of experience). Over 2,000 administrators, or 25% of the workforce, were eligible to retire. The eligible pool is expected to grow through 2004 for both teachers and administrators (see **Table 2**). Thus, teacher and administrator attrition due to retirement will increase, however, it will have a much greater impact on the administrator workforce due to its advanced age and experience levels (the teaching force is also aging but does not have the requisite years of experience).

Increasing student enrollments through 2008 are likely to further exacerbate teacher and administrator demand. Illinois public school enrollments have been increasing since 1990 and that overall trend is expected to continue through 2008. At the elementary level, enrollments are expected to peak in 2003 and then begin to decline through 2008 (see **Figure 5**). Secondary enrollments, on the other hand, are expected to continue increasing for the next seven years (see **Figure 6**).

In the last four years, student enrollment has increased by about 1 percent per year, while the full-time teacher workforce increased by an average of 2.4% a year and the administrative workforce increased by an average of 2.6%. It is possible that part of the teacher workforce growth could be attributed to district school reform efforts, such as class-size reductions.

Educator demand is rising sharply. As **Figure 7** shows, demand for new teachers has increased 60% in the last four years (from 7,834 in 1997 to 12,603 in 2001). In that same time period, the demand for first-time teachers has increased 57% while the supply of first-time teachers has remained relatively constant. Thus, districts are hiring more of the available supply to meet the growing demand. The greater the proportion of the new supply that is hired, the more likely it is that districts are hiring less qualified candidates.

Due to attrition and workforce growth, overall demand for teachers increased 13% and demand for administrators increased 11% in 2001. While most of the administrator demand was met by the previous year's teaching force, over 12,600 new teachers (i.e., 7,302 first-time teachers and 5,301 re-entries) had to be hired in 2001.

About 55,000 new teachers and 9,000 new administrators/other educators will be needed. Through 2005, Illinois will need about 55,000 (between 46,000 and 64,000) teachers, and about 9,000 (between 7,000 and 12,000) administrators and other educators. These figures represent the total number of new educators to be hired for the next four years due to increasing demand and attrition. About 60% of the projected demand for teachers will need to be met by first-timers. See **Table 3** for details and the page following for the projection methodology.

Relative to educator categories, the findings are presented in terms of: (1) the greatest number of educators needed by educator category, and (2) the "need index" expressed as the percent of the 2001 workforce that will need to be replaced. The "need index" indicates the relative importance/need for each educator category.

In terms of **number**, the greatest needs through 2005 in the

1. administrator/other categories include: social worker; guidance counselor; elementary principal; coordinator; librarian/media specialist; psychologist; high school principal; consultant; director; and junior high principal.
2. teacher categories include: self-contained elementary; special education; English/language arts; science; mathematics; social science; physical education; bilingual education; foreign language; and music.

Note: For a more meaningful comparison of the categories in terms of number needed, the instructional Staff/Teacher categories were further collapsed where appropriate, e.g., biology, chemistry, etc., were collapsed into one category, science. No similar collapsing was done in the section on need index below.

In terms of the **need index**, the greatest needs through 2005 in the

1. administrator/other educator categories include: consultant; other superintendent (deputy, associate, assistant); social worker; occupational therapist; administrative assistant; physical therapist; director; business manager; coordinator; and junior high principal.
2. teacher categories include: cross categorical; bilingual education; computer tech/programming; English as a second language; Spanish; special education (other); health occupations; language arts; reading; and general science.

IV. Special Concerns

Unfilled positions 42,000 students may not have suitably qualified teachers. In September 2000, Illinois public schools reported a total of 2,637 unfilled positions. These positions were budgeted by districts for the school year but were not filled, often because qualified applicants could not be found. Of the 2,637 unfilled positions, 2,225 were teaching positions. The remaining vacancies were administrators and other certificated positions. In 2000, the average pupil-teacher ratio (PTR) was 18.7 to 1, which means that about 42,000 students may have been in classrooms without any suitably qualified teachers. (Note: the 2000 state elementary PTR was 19.3 to 1, and the secondary PTR was 18.1 to 1).

More special education, mathematics, and physical education teachers are needed. Illinois currently produces more teachers each year than public schools hire, except in the areas of special education, mathematics, and physical education. However, even when enough teachers are produced, increased demand in the fastest-growing states, lucrative financial incentives such as signing bonuses, and increased competition from industry erode Illinois' educator supply.

Geographic and other factors affect staffing. Regional shortages exist despite the number of educators produced at the state level. For example, 115 administrative and 112 guidance counselor positions went unfilled in 2000 despite the large number of newly certified educators produced the previous year. The geographic location of these positions may well have an impact—there is a wide range among districts in salaries paid and the working conditions for educators.

Of the 2,637 unfilled positions, 1,387 (50%) were in the Chicago School District 299 (including 368 elementary classroom teaching positions), 761 (28%) were in the suburban districts of Cook, Dupage, Kane, Lake McHenry and Will counties, and 568 (22%) were in the rest of the state. Conditions in these “hard-to-staff” districts must be identified and examined. The subject areas with the greatest number of unfilled positions were: special education (662), elementary teacher (453), mathematics (112), guidance counselor (112), and physical education (103). See **Table 4** for the complete list of unfilled positions by subject.

Educator quality called into question. The media recently reported that a small number of Illinois teachers consistently failed key examinations required for certification. Yet, some Illinois classrooms are being staffed by such teachers. Also, Chicago School District 299, Illinois' largest, uses individuals who hold only substitute certification, not full teacher certification, to staff its classrooms indefinitely. Based on the U.S. Department of Education Schools and Staffing Survey, Ingersoll (1999) reported that out-of-field teaching is rampant nationally, including in Illinois. Out-of-field teaching is often defined as the lack of certification or a lack of academic qualifications. If Illinois wants to have a clear picture of the extent of out-of-field teaching in this state, an independent study is needed to examine educator quality in Illinois schools.

H.R 1 requirement. Recently, the President signed into law H.R 1, an education bill "to close the achievement gap with accountability, flexibility, and choice, so that no child is left behind." Among the requirements of this bill is the need to have a qualified teacher in every classroom. Although the impact of this requirement is unclear at this time, the end result will be the need to train more highly qualified educators.

V. Conclusion

Overall, the supply and demand picture remains troubling. While the supply side has remained relatively flat, educator demand has increased dramatically for the last 4-5 years. Increasing student enrollments are expected to drive increased educator demand. At the same time, attrition is escalating. Early-career teacher flight will continue to significantly impact demand, as will retirement, especially for administrators. Districts are left with fewer candidates to choose from and less opportunity to find the best qualified candidates for positions. Thus, supply and demand affect not only educator quantity, but also educator quality.

References

- Illinois State Board of Education. (2001). *Illinois Public School Enrollment Projections: 2001-02 – 2009-10*. Springfield, IL.
- Blair, J. (2001, February 21). Lawmakers plunge into teacher pay. *Education Week*, p. 1.
- Illinois State Board of Education. (2000). *Educator Supply and Demand*. Springfield, IL.
- Ingersoll, R. (1999). The problem of underqualified teachers in American secondary schools. *Educational Researcher*, 28(2), 26-37.
- Klempen, R. A. and Richetti, C. T. (2001, December). Greening the next generation of principals. *Education Week on the Web*. Retrieved December 12, 2001 from the World Wide Web:
<http://www.edweek.org/ew/newstory.cfm?slug=15klempen.h21>.

Appendices

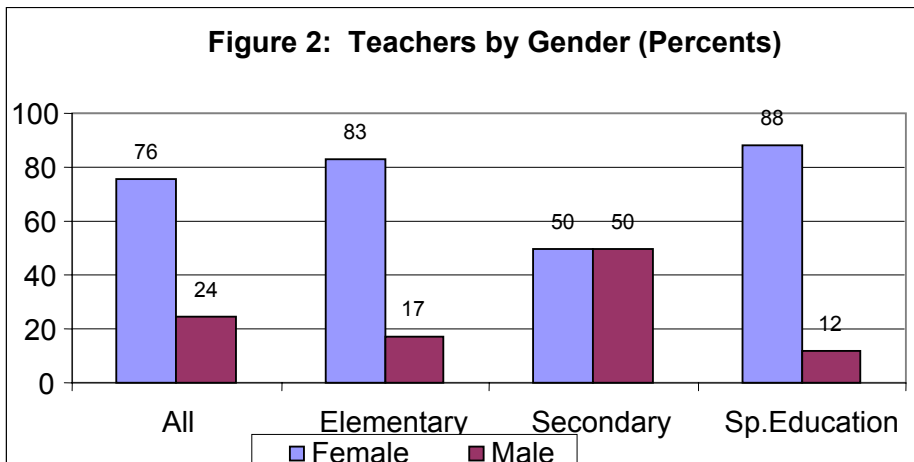
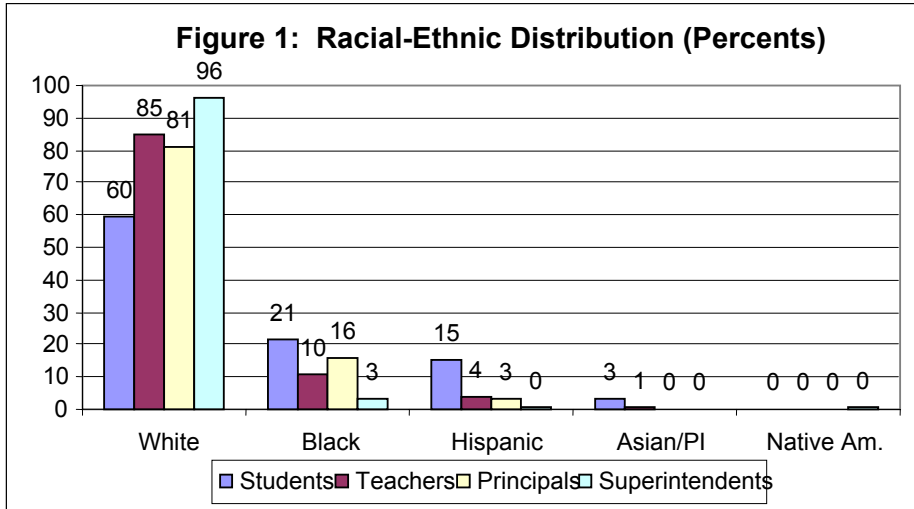


TABLE 1: Professional Education Enrollments

Professional Preparation Enrollments	1999		2000		Change	
	n	%	n	%	n	%
Undergraduate Full-Time	21,806		19,612		-2,194	-10%
Undergraduate Part-Time	3,087		2,744		-343	-11%
Total	24,893		22,356		-2,537	-10%
Graduate Full-Time	3,415		3,857		442	13%
Graduate Part-Time	11,709		12,114		405	3%
Total	15,124		15,971		847	6%

SOURCE: Division of Professional Preparation

Figure 3: Historical Teacher Attrition

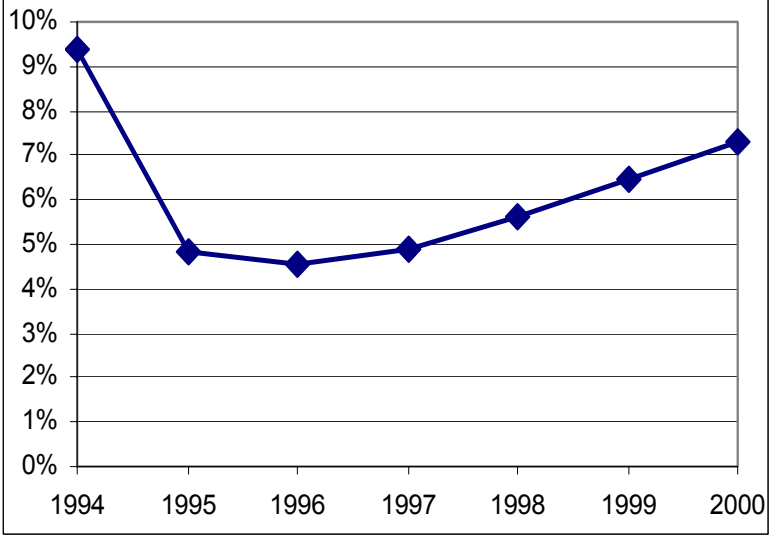


Figure 4: Historical Administrator Attrition

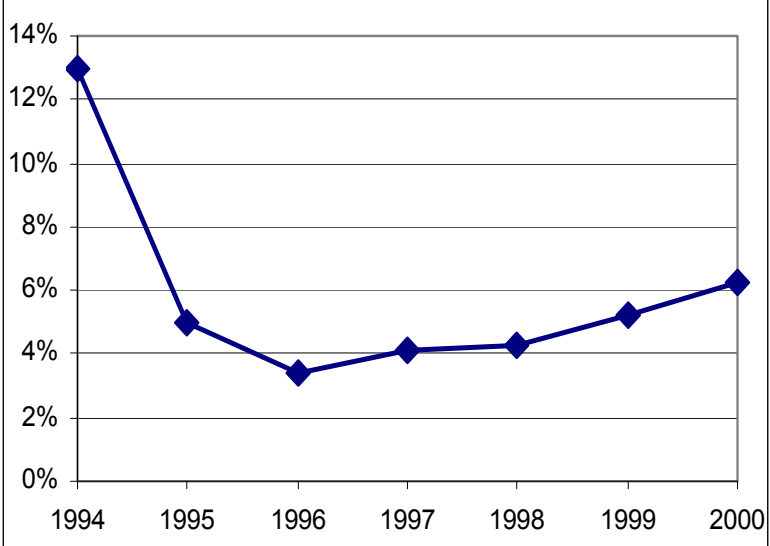


Table 2: 2001 Projected Eligible to Retire

	2001	Projected Eligible Pool*		
		2002	2003	2004
Teachers				
Eligible to Retire	15,607	17,903	19,675	21,373
% of Workforce	12%	14%	15%	16%
Workforce	127,323	130,379	133,508	136,712
Administrators				
Eligible to Retire	2,123	2,498	2,771	2,952
% of Workforce	25%	28%	31%	32%
Workforce	8,551	8,773	9,001	9,235

*Teacher projections assume 2.4% annual workforce growth and 10% annual attrition in the eligible pool. Administrator projections assume 2.5% annual workforce growth and 10% annual attrition in the eligible pool.

Figure 5: Elementary Enrollments (K-8)

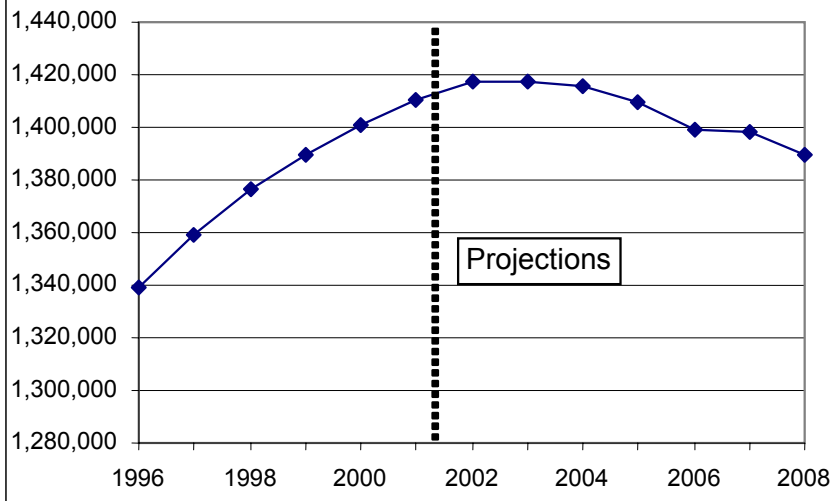


Figure 6: Secondary Enrollments (9-12)

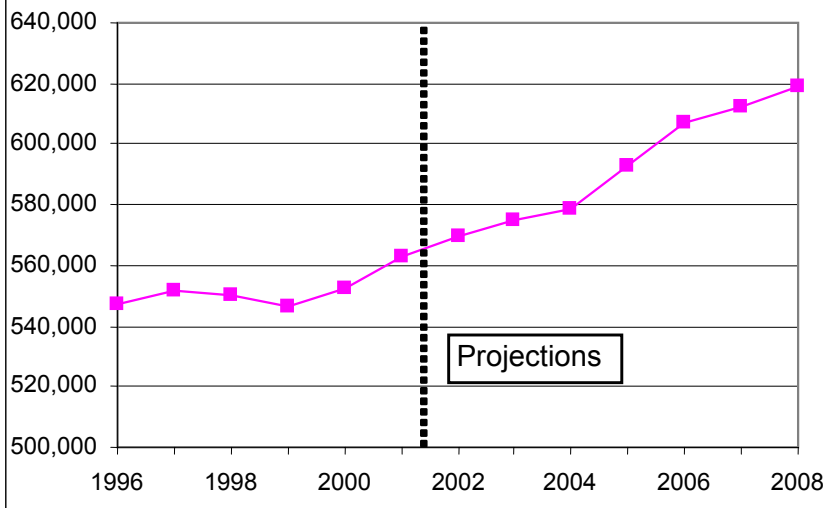


Figure 7: Number of New Teachers Hired

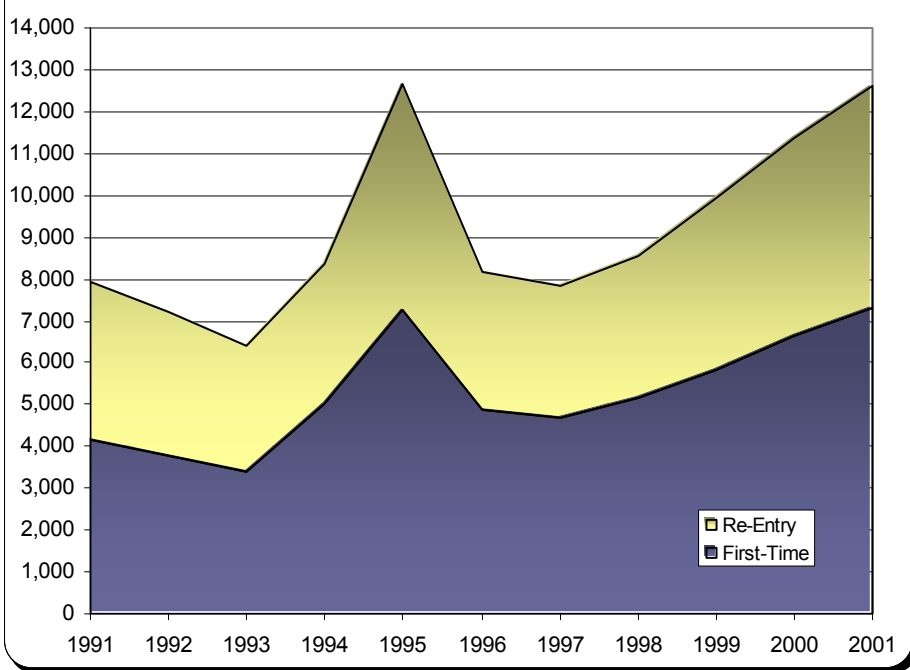


Table 3: Projected Need for Educators [2002-05]

	Total Employed 2001	Projected Need Through 2005			Need Index
		Low Estimate	Middle Estimate	High Estimate	
Administrative					
Regional Supt./Asst.	92	16	38	60	41.3%
District Supt.	852	221	262	303	30.7%
Other Supt. (Deputy, Assoc., Asst.)	407	172	295	418	72.5%
Admin Assistant	149	47	78	109	52.3%
Business Manager	165	49	78	106	47.2%
Director/Asst.	1,102	454	540	625	49.0%
Elem. Principal/Asst.	2,713	740	984	1,227	36.3%
Jr. High Principal/Asst.	1,017	345	468	591	46.0%
High School Principal/Asst.	1,443	463	575	687	39.9%
Jr./Sr. High Dean	611	198	227	255	37.1%
Other Certified Staff					
Consultant	744	362	549	736	73.8%
Coordinator	1,887	757	874	991	46.3%
Library/Media Specialist	1,960	514	740	966	37.8%
Supervisor	520	107	132	156	25.3%
Occupational Therapist	60	34	33	31	54.3%
Physical Therapist	23	12	11	11	49.1%
School Service Personnel					
Guidance Counselor	2,900	785	1,070	1,355	36.9%
Nurse	921	290	383	475	41.5%
Psychologist	1,426	564	620	676	43.5%
Social Worker	2,479	1,253	1,552	1,852	62.6%
Other Position					
	200	44	47	50	23.4%
Total: Non-Instructional Staff	21,671	7,429	9,554	11,679	44.1%
Instructional Staff					
Art	2,636	1,112	1,373	1,635	52.1%
At-Risk / Pre-K	1,315	566	593	621	45.1%
Bilingual Education	2,233	1,654	1,735	1,815	77.7%
Computer Tech/Programming	1,150	663	859	1,055	74.7%
Driver Education	595	117	161	205	27.1%
English as a Second Language	618	399	423	446	68.4%
English/Lang. Arts - English	5,246	1,787	2,370	2,953	45.2%
English/Lang. Arts - Language Arts	3,111	1,464	1,747	2,031	56.2%
English/Lang. Arts - Other	716	273	325	377	45.4%
English/Lang. Arts - Reading/Remedial Reading	1,737	735	925	1,114	53.2%
Foreign Language - Other	818	274	274	273	33.5%
Foreign Language - Spanish	1,903	1,099	1,241	1,383	65.2%
Gifted Education	660	251	313	375	47.4%
Health Education	583	188	220	252	37.8%
Learning/Resource Center Library	387	113	168	224	43.5%
Mathematics	6,882	2,446	2,997	3,548	43.6%
Music - Instrumental/Vocal	3,878	1,420	1,462	1,503	37.7%

Other Instructional	2,314	1,330	1,562	1,793	67.5%
Physical Education	6,789	1,633	2,035	2,437	30.0%
Science - Biology	1,462	493	618	742	42.2%
Science - Chemistry	826	310	415	521	50.3%
Science - Earth Science	289	96	122	148	42.2%
Science - General Science	2,784	1,216	1,477	1,737	53.0%
Science - Other	291	30	77	123	26.4%
Science - Physical Science	334	148	144	140	43.1%
Science - Physics	391	137	157	176	40.1%
Self-Contained Elementary	42,158	13,443	16,713	19,983	39.6%
Social Science	5,733	2,013	2,408	2,803	42.0%
Special Ed. - Behavior Disordered	2,216	688	674	660	30.4%
Special Ed. - Cross Categorical	3,610	2,754	2,898	3,041	80.3%
Special Ed. - Deaf/Hard of Hearing	593	158	192	227	32.5%
Special Ed. - EMH/TMH	1,926	297	426	556	22.1%
Special Ed. - Learning Disabled	7,193	2,306	2,406	2,505	33.4%
Special Ed. - Other	2,931	1,585	1,794	2,002	61.2%
Special Ed. - Physically Handicapped	273	59	62	65	22.8%
Special Ed. - Speech & Lang Impaired	2,527	1,234	1,322	1,411	52.3%
Special Ed. - Visually Impaired	212	50	64	78	30.2%
Title 1- Remedial Math/Reading	3,229	724	959	1,194	29.7%
Voc/Tech - Agriculture	319	101	125	148	39.1%
Voc/Tech - Business/Marketing/Mgt.	1,358	262	373	485	27.5%
Voc/Tech - Family/Consumer Sc	1,180	305	372	439	31.5%
Voc/Tech - Health Occupations	72	35	41	46	56.3%
Voc/Tech - Industrial Occupations	1,533	238	335	433	21.9%
Voc/Tech - Vocational Ed	312	115	134	153	43.0%
Total: Instructional Staff	127,323	46,323	55,091	63,859	43.3%
TOTAL	148,994	53,752	64,645	75,538	43.4%

Note: Column totals and/or subtotals may vary due to rounding.

Projection Methodology— Future Needs

The projections of the needs for educators were based mainly on two Teacher Service Record (TSR) variables: (1) the workforce (the number of full-time educators employed) in each category, and (2) the attrition rate (the ratio of the number of educators who left the education system to the number in the workforce) for each category. The educator categories are listed in **Appendix G**.

The Workforce Component: First, the workforce trend since 1993 was examined. Then, the annual percentage changes were computed and an average was derived. Generally, the yearly workforce for each category was projected based on the historical trend and the application of the average percentage change for each category.

The Attrition Rate Component: The trend for attrition rates since 1996 was examined. (Attrition rates for years prior to 1996 were not considered because of the effects of the Early Retirement Incentive program of 1993 and 1994.) The annual percentage changes were computed and an average was derived. Generally, the yearly attrition rate for each category was projected based on the historical trend and the application of the average percentage change for each category.

Modifying Factors: In addition to the workforce and attrition trends, other factors considered were the laws/conventions governing the Illinois education system. For example, there will be only one district superintendent for each district and as districts consolidate, the number of district superintendents will likely decline. On the other hand, the need for other superintendents (deputy, associate, assistant) will likely increase. While the data do not show a strong correlation between student enrollment and workforce growth, consideration was given to student enrollment in the projection of selected categories, including the greater need for secondary teachers over elementary teachers.

Projection of Future Need—Low Estimate: Based on the actual 1998-2000 attrition rates, an average attrition rate was computed for each educator category. (Attrition rates prior to 1998 were considered too low for computing this average). This rate was applied to the projected workforce to derive the need for each future year due to attrition. The sum of the future need due to attrition and the yearly change in the projected workforce (difference in the workforce) provided the projected total future need for each year.

Projection of Future Need—High Estimate: The trend in the attrition was considered. Based on the changes in attrition rates between 1996 and 2000, an average rate was computed for each educator category. This rate was applied to the projected workforce to derive the need for each future year due to attrition. The sum of the future need due to attrition and the yearly change in the projected workforce (difference in the workforce) provided the projected total future need for each year. Since most of the categories showed increasing trends, this part of the projection process produced the higher level estimate of the future need for educators.

Projection of Future Need—Middle Estimate: The average of the low and high estimates was computed to derive the middle estimate.

Need Index: The index for each category is its projected need (middle estimate) expressed as a percent of its 2001 workforce.

Table 4 : Number of Unfilled Positions in September 2000 [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			
Pre-Kindergarten			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	14.30
Mathematics	34.80	77.20	112.00
Music (instrumental/vocal)	79.63	17.30	96.93
Physical Education	59.30	44.10	103.40
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			<u>2636.71</u>