

2002
RESEARCH
REPORT

Educator Supply and Demand

in the United States



Research from the
American Association for Employment in Education

American Association for Employment in Education, Inc.

Since 1934, the American Association for Employment in Education, Inc. has focused on enhancing and promoting university career services and school district human resources as integral and critical components of the education process. The association manages diverse services, publications, and activities designed to help schools, colleges, and universities meet their staffing needs. AAEE is an international association that unites the two vital components of education staffing—school districts and colleges.

Education is a unique profession. It requires colleges to provide focused career services, and simultaneously, it requires school systems to develop dynamic hiring strategies. With rapid changes in the marketplace, both sides of the staffing equation are essential to ensure the quality staffing of schools today and tomorrow: qualified and caring teachers, administrators, and support personnel in every school system. In its effort to provide the education community with information about the yearly recruitment of educators, the AAEE is pleased to provide this research report of the association's 2002 study on educator supply and demand in the United States. This is the 26th year that AAEE has prepared the report.



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The association wishes to pay tribute to Jim Akin, retired director of career services at Kansas State University, who conducted the initial supply/demand research in 1977, authored the original report, and guided this research for many years.

Finally, we appreciate the talents of the staff of Scholl Communications Incorporated of Deerfield, IL for their ability to take research data and terminology and shape it into a useful, interesting report for the educators and policy decision makers who will utilize the information.

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American Association for Employment in Education Educator Supply and Demand in the United States

2002 Report

This is the 26th annual study of educator supply and demand prepared by the American Association for Employment in Education as part of its mission to provide up-to-date, accurate information about the job market for educators. The report is prepared for:

- ❖ College and university deans making decisions about teacher education programs;
- ❖ Human resources administrators in school systems searching for qualified candidates and guidance counselors advising future college students;
- ❖ State departments of education and other education agency officials involved with policy decisions affecting the field;
- ❖ College and university students selecting majors, graduates seeking employment, and career services administrators advising education students;
- ❖ The media and general public to help them understand the issues in teacher supply and demand.

Highlights

- ❖ The demand for educators peaked in 2001 and softened in 2002.
- ❖ The perceived need by school districts is as great or greater, but overall hiring is down due to the deflation in the economy and changes in staffing practices (hiring out-of-field, alternative certification, or on-the-job certification).
- ❖ Ten out of ten special education teaching fields are in significant or some shortage.
- ❖ Two fields (dance and physical education) were the only fields in some surplus; all other fields were in balanced or shortage categories.
- ❖ For the seventh consecutive year, there are no fields reported in considerable surplus.
- ❖ The strongest factors cited as increasing the demand for educators are:
 - early retirement,
 - routine retirement,
 - student enrollment, and
 - class size.
- ❖ The strongest factors that contribute to the decrease in the supply of educators are:
 - school violence,
 - working conditions, and
 - salaries.
- ❖ State funding and state mandates have negatively affected both supply and demand this year.
- ❖ A majority of institutions continue to report “no change” in the numbers of minority students coming through their programs.
- ❖ The supply of candidates for any singular position is impacted by its geographic location and the willingness of the candidates to move to that location.
- ❖ The teacher shortage cannot be generalized, as regional differences and field-specific differences exist.

The data in this report will be useful to:

- ❖ College and university deans making decisions about teacher education programs.
 - Consider the ramifications of supply and demand with respect to program modifications, enrollment targets, and adding or deleting programs.
 - Recruiting students of color needs to be a focus of every college or department of education, considering the continuing critical shortage of minority teachers.
 - Prepare educators to work in settings with highly diverse populations.
 - Prepare educators to teach an increasing number of special needs students in regular classrooms.
- ❖ Human resource administrators in school systems searching for qualified candidates, and counselors advising future college students.
 - Understand the projections for employment of teachers will make it difficult to find the right teacher for every classroom, given the regional mismatch of positions and candidates.
 - Consider the data when developing recruitment strategies.
 - Share the data with school counselors who advise students considering career choices.

- ❖ Officials in state departments and other education agencies involved with policy decisions affecting the field.
- Be aware of the national increase in student enrollments and the ramifications for their states and agencies.
- Evaluate additions to or deletions from teacher education programs with knowledge of supply and demand, as well as changing patterns of enrollment in public schools.
- Be aware that state and national mandates have an impact on the supply and demand of educators.

- ❖ College and university students selecting majors, graduates seeking employment, and career services representatives advising education students.

Implications for students selecting majors:

- Compare interests to the job market indicators.
- Consider selecting fields with relatively more demand.
- Consider double certification, with at least one in a relatively high demand area.
- Understand that the market for teachers is likely to continue to improve.

Implications for graduates seeking employment:

- Understand the market in the region of the country where you are seeking employment.
- Understand that the market for teachers is likely to continue as a good job market, despite economic concerns in 2002, due to retirements, attrition, and PK-12 student enrollments.

Implications for career services representatives advising education students:

- Assist students who are interested in education in the selection of majors, and educate them about fields of high demand and regional variations in demand.
- Assist candidates in balancing market factors with regions of choice.
- Advise local school administrators about supply and demand factors.

- ❖ The media and general public to help promote understanding of the issues in teacher supply and demand.
- Understand that as the demand for educators stays strong, it is likely that persons will be hired who are uncertified or who are teaching out-of-field.
- Understand the direct relationship between student learning and the quality of instruction/teaching.

- Recognize that increasing enrollments in the public schools impact the hiring of teachers, class sizes, capacity of buildings, and cost of education.
- Be aware that there are increasing numbers of students enrolling with English as a second language, creating challenges for teaching and learning.

Inside the 2002 Research Report

Introduction and Review of Literature	3
Supply and Demand by Region and Education Field	4
2002 Study Methodology	5
2002 National and Regional Results	7
Relative Demand by Field	8
National Three-Year Trend Data	9
Projections of Availability of Teaching and Education-Related Employment Opportunities	11
Availability of Minority Candidates	11
Program Offerings Versus Teacher Demand	13
Conclusions and Recommendations	14
Factors Affecting Hiring Opportunities – National Frequency and Mean	15
Factors Affecting Hiring Opportunities – Regional and National Means	16
References	17
Appendix A	
Intraclass Correlations Across Teaching Fields	18
Appendix B	
Regional Data Trends and Observations	19 – 27
Appendix C	
Participants in the 2002 Study	28-29

Introduction and Review of Literature

In the public eye and throughout the literature, the field of education has drawn much attention in recent years. Research and public interest topics come to the forefront in the education journals as well as the local and national media. With the President making education a focus of the national agenda, this trend shows no sign of declining (Public Agenda 2000).

When considering educator supply and demand in the United States, it is important to note that the shortages are not in every region of the country or in every school district. Public Agenda 2000 reported that most school administrators are facing some level of teacher shortage, but only 15 percent say that the shortage is widespread. Teachers are especially needed in the areas of special education, mathematics, science, and technology. Moreover, minority teachers are truly the minority, and the urban districts are having the most difficulty placing teachers in classrooms (Blair, 1999; Gursky, 2001). These shortages may be attributed to the increasing K-12 population, decline in working conditions, and shortages of candidates in various institutions throughout the country over the past few decades. It is also a result of school reform and improvement efforts (Brunetti, 2001; Hussar & Gerald, 1996; NCES, 1999; Wadsworth, 2001). Further, the teachers already in place who entered the profession 30 years ago are able to retire in masses (Blair, 1999).

The U.S. Department of Education estimates that within the first three years of teaching, more than 20 percent of teachers leave the profession. Estimates for urban school districts are even more startling, where it is predicted that 50 percent of teachers will leave the classroom early in their careers (Boser, 2000; Gursky, 2001; Wadsworth, 2001). The National Commission on Teaching has confirmed through extensive research that the single most important determinant of student achievement is the expertise and qualifications of the teachers (Darling-Hammond, 1997). According to the U.S. Department of Education an estimated 6.5 percent of new teachers hired in public schools hold emergency credentials. In urban areas, it increases to 10 percent. It extends to 14 percent in districts where the student population is 50 percent or more minority (Pullen, 1998).

To complicate the situation even further, many states are providing a loophole to avoid certification by using out-of-field teach-

ers. Currently in the United States, approximately one in every four secondary teachers does not have any type of certification in his or her primary teaching field. This figure is larger for those teaching mathematics and science courses, where 30 percent of science teachers and 40 percent of mathematics teachers are not fully qualified (Bradley, 1999; Darling-Hammond, 1997).

The Third International Math and Science Study (TIMSS) pointed to the fact that the United States needs more teachers for mathematics and science (National Education Goals Panel, 1997). In a report produced by the Southern Regional Education Board, it was stated that only 54 percent of college graduates trained in mathematics were actually teaching in 1996 (Gursky, 2001). Longitudinal shortages in mathematics and science education present a conundrum for teacher education programs and school districts. The need for mathematics and science teachers has been stressed for more than three decades. Teacher education programs are either not able to recruit enough future mathematics and science teachers or they are not able to identify those future teachers who will remain teaching rather than graduating and pursuing other related fields that are more lucrative (Pullen, 1998; Galluzo, 1999).

All areas of special education teachers are needed. An ever-growing population of inclusion students has exacerbated the long-time shortage of special education teachers. As the projected need for special education teachers suggests, every teacher education program must increase its graduates by more than half of what it had been producing during the 1990s (Lorandean, 1998). Special education fields including physical, mental, hearing, visual and multiple impairments, and behavioral disorders have consistently been areas of great need (AAEE 1998, 1999, 2000). It would seem that more teacher education programs would be preparing special education teachers at greater rates; however, the data suggest otherwise. Behavior disorders, learning disabilities, and mental impairment programs were only offered by approximately half of the teacher education programs responding to the American Association for Employment in Education (AAEE) annual surveys from 1994 to 1998 (AAEE, 1999, p. 13). To compensate for shortages, 28,000 new special education teachers will be needed annually during the coming decade (Sack, 1999).

To make matters worse, 24 percent of the total K-12 teaching population will be

retiring or able to retire by 2005 (Hussar & Gerald, 1996). The American Association for Employment in Education (1998, 1999, 2000) identified that routine and early retirements have been the most important factors in positively influencing future teacher employment. During the decade from 1986 to 1996, the median age of teachers has risen from 41 years to 44 years (NCES, 1999). Bandeira de Mell and Broughman (1996) reported that 24 percent of elementary and 26 percent of secondary teachers will be 55 years or older within this decade, indicating that approximately the same number of elementary and secondary level teachers can be expected to retire between 2005 and 2010. Thus, if student enrollments were held constant, more than 24 percent of the teachers at each teaching level would need to be replaced within the next 10 years. Still, such retirement projections should be noted with caution, as teacher retirement does not depend entirely on age. In some cases, states or districts encourage older, more highly paid teachers to leave the profession through early retirement incentives. Further, many retirement decisions are made or changed on the basis of general economic conditions including inflation rates, general working conditions, and administrative personnel changes (NEA, 1997; Weston, 1997).

“Too often, teaching is [described as] a dead-end job with low status, uncompetitive salaries, and poor working conditions” (Boles, 2000, p. 59). Leading reasons teachers have cited for leaving the profession include a lack of control over how their school was run, feeling isolated, and ineffective administrative support (Weld, 1997). Some teachers leaving the profession to begin a different career cited a frustration with their colleagues as the reason; however other teachers have alluded to this as a reason for entering and remaining in the profession of teaching (Brunetti, 2001; Stanford, 2001). Those who are staying in education cite passion for the subject material, autonomy of the profession, collegiality, and holidays as reasons they were attracted to the career of teaching. In general, it appears that teachers enter the classroom expecting to have a positive impact on students' lives (Brunetti, 2001; Shann, 1998; Stanford, 2001).

It has been argued that recruiting efforts would benefit most by increasing teachers' salaries. Sandra Feldman, president of the American Federation of Teachers (AFT), asserts, “Low salaries are preventing quality people from both entering and staying in

Table 1

Teacher Supply and Demand by Field and Region

Region codes: 1 - Northwest, 2 - West, 3 - Rocky Mountain, 4 - Great Plains/Midwest, 5 - South Central, 6 - Southeast, 7 - Great Lakes, 8 - Middle Atlantic, 9 - Northeast, 10 - Alaska and 11 - Hawaii.

Demand codes: 5.00 - 4.21 = Considerable shortage; 4.20 - 3.41 = Some Shortage; 3.40 - 2.61 = Balanced; 2.60 - 1.81 = Some Surplus; 1.80 - 1.00 = Considerable Surplus

Field	Region											National		Change
	1	2	3	4	5	6	7	8	9	10	11	2002	2001	
Agriculture	—	3.50	4.50	3.50	2.67	3.25	3.67	3.25	—	—	—	3.34	3.69	-0.35
Art/Visual Education	2.62	2.67	3.38	3.10	2.86	2.82	2.92	2.55	2.79	—	—	2.88	2.99	-0.11
Bilingual Education	3.63	4.21	4.86	3.92	4.38	4.09	4.05	3.71	4.25	—	—	4.10	4.29	-0.19
Business Education	3.20	2.90	3.13	3.39	2.85	3.07	3.04	2.67	3.00	—	—	3.07	3.28	-0.21
Computer Science Education	4.00	3.00	3.50	3.96	3.63	3.62	3.52	3.25	4.25	—	—	3.65	3.98	-0.33
Dance Education	2.25	2.25	2.50	2.80	2.50	2.33	2.80	2.00	2.75	—	—	2.54	2.82	-0.28
Driver Education/Traffic Safety	4.00	4.00	—	3.25	2.75	2.43	3.00	3.00	—	—	—	2.94	2.95	-0.01
Elementary Education														
Pre-K	2.82	3.36	3.44	2.86	3.38	3.30	2.63	2.57	2.90	—	4.00	2.95	3.26	-0.31
Kindergarten	2.50	3.33	3.42	2.71	3.33	3.26	2.61	2.46	2.54	—	3.00	2.85	3.22	-0.37
Primary	2.53	3.46	3.54	2.690	3.36	3.34	2.58	2.63	2.47	2.00	4.00	2.88	3.21	-0.33
Intermediate	2.75	3.43	3.45	2.69	3.53	3.51	2.81	2.79	2.57	2.00	4.00	3.03	3.35	-0.32
Middle	3.20	3.76	3.40	3.12	4.03	3.71	3.18	3.00	2.91	3.00	5.00	3.35	NA	NA
English/Language Arts	3.00	3.38	3.27	3.25	3.15	3.33	2.98	2.73	2.85	3.00	3.00	3.10	3.28	-0.18
English as a Second Lang. (ESL)	3.27	3.61	4.33	3.89	4.39	4.31	3.59	3.64	4.00	—	—	3.91	4.24	-0.33
Health Education	2.62	2.77	3.43	2.44	2.68	2.63	2.59	2.38	3.13	—	—	2.63	2.67	-0.04
Home Economics/Consumer Sci.	3.00	2.90	4.00	3.78	3.10	3.14	3.65	3.80	4.00	—	—	3.42	3.51	-0.09
Journalism Education	2.75	2.50	3.00	3.28	3.00	3.00	2.93	3.00	2.00	—	—	2.97	3.07	-0.10
Languages														
Classics	2.75	3.33	3.67	3.42	3.00	3.33	3.67	3.10	3.00	—	—	3.32	3.31	0.01
French	2.73	2.83	3.11	3.47	3.25	3.44	3.54	3.15	3.38	—	—	3.31	3.36	-0.05
German	2.75	3.06	3.00	3.37	3.20	3.37	3.35	2.96	3.40	—	—	3.22	3.27	-0.05
Japanese	3.14	3.33	3.33	3.20	3.60	3.29	3.86	3.00	3.33	—	—	3.44	3.54	-0.10
Spanish	3.71	3.55	4.25	3.91	4.04	4.07	3.97	4.09	3.82	—	—	3.96	4.17	-0.21
Mathematics Education	3.88	4.22	4.54	4.34	4.55	4.35	4.12	4.18	4.55	4.00	—	4.28	4.55	-0.27
Music Education														
Instrumental	3.00	3.40	4.00	3.85	3.07	3.05	3.15	3.07	3.00	—	—	3.29	3.61	-0.32
Vocal	2.67	3.00	4.00	3.81	3.11	3.03	3.07	3.17	3.00	—	—	3.23	3.59	-0.36
General	3.00	3.00	4.00	3.76	3.08	2.91	3.17	3.25	3.15	—	—	3.23	3.48	-0.25
Physical Education	2.54	2.68	2.45	2.48	2.57	2.69	2.42	2.42	2.90	—	—	2.55	2.72	-0.17
Reading	3.33	3.50	3.43	3.34	3.59	3.43	3.26	3.43	3.06	—	—	3.37	3.51	-0.14
Science Education														
Biology	3.86	3.85	4.00	4.00	3.97	3.90	3.83	3.73	4.13	—	5.00	3.89	4.10	-0.21
Chemistry	4.07	4.28	4.00	4.30	4.18	4.09	4.17	4.14	4.65	—	5.00	4.20	4.42	-0.22
Earth/Physical	3.83	4.21	3.90	4.00	3.93	3.91	3.80	4.02	4.11	—	5.00	3.96	4.14	-0.18
Physics	4.14	4.16	3.80	4.33	4.24	4.23	4.18	4.33	4.67	—	5.00	4.26	4.43	-0.17
General	3.71	4.05	4.00	3.80	4.04	3.75	3.61	3.71	4.22	4.00	5.00	3.81	4.04	-0.23
Social Studies Education	2.93	2.71	2.85	2.69	2.97	2.68	2.30	2.39	3.17	3.00	5.00	2.63	2.75	-0.12
Special Educaton														
Multicategorical	4.17	4.00	4.40	4.28	4.14	4.40	3.96	3.98	4.55	—	5.00	4.20	4.53	-0.33
Emotional/Behavioral Disorders	4.00	4.30	4.60	4.68	4.30	4.48	4.26	3.88	4.78	—	—	4.42	4.66	-0.24
Hearing Impaired	3.60	4.43	4.50	4.54	4.00	4.38	4.00	3.50	4.67	—	—	4.17	4.41	-0.24
Learning Disability	4.33	4.33	4.25	4.34	3.78	4.49	3.85	3.82	4.60	—	—	4.21	4.47	-0.26
Mental Retardation	4.20	4.67	4.67	4.44	4.00	4.25	4.11	3.43	4.86	—	—	4.26	4.49	-0.23
Visually Impaired	4.00	4.33	4.33	4.45	4.00	4.67	3.80	3.50	4.50	—	—	4.19	4.48	-0.29
Mild/Moderate Disabilities	3.67	4.25	4.83	4.41	4.21	4.30	4.11	3.60	4.40	—	5.00	4.23	4.44	-0.21
Severe/Profound Disabilities	4.33	4.70	4.67	4.53	4.00	4.54	4.21	3.56	4.63	—	—	4.35	4.59	-0.24
Early Childhood Special Ed.	3.57	3.89	4.29	3.97	3.64	3.93	3.61	3.65	3.92	—	—	3.82	4.35	-0.53
Dual Certificate (Gen./Spec.)	4.14	3.89	3.80	3.96	3.50	4.17	3.85	3.86	4.00	—	5.00	3.92	4.37	-0.45
Speech Education	3.14	3.20	3.00	3.21	3.06	3.13	3.23	3.67	2.50	—	—	3.19	3.45	-0.26
Technology Education	3.83	4.14	4.00	3.96	4.12	3.94	3.88	4.31	4.00	—	—	4.02	4.11	-0.09
Theatre/Drama Education	2.83	2.80	3.29	2.97	2.95	2.56	2.91	2.50	2.67	—	—	2.87	2.99	-0.12

Field	1	2	3	4	5	6	7	8	9	10	11	2002	2001	Change
Administration														
Principal														
Elementary	3.44	3.55	3.63	3.74	3.31	3.52	3.66	3.53	4.18	—	—	3.59	3.74	-0.15
Middle School	3.63	3.60	3.63	3.74	3.33	3.62	3.77	3.50	4.40	—	—	3.65	3.84	-0.19
High School	3.56	3.65	3.50	3.94	3.38	3.62	3.85	3.63	4.36	—	—	3.72	3.90	-0.18
Business Manager	3.33	3.00	3.00	3.30	3.50	3.50	3.50	3.50	3.00	—	—	3.38	3.36	0.02
Curriculum Director	3.25	3.00	3.67	3.06	3.18	3.12	3.27	3.15	3.25	—	—	3.18	3.44	-0.26
Human Resources Director	3.00	3.00	3.67	3.25	3.00	3.25	3.36	3.00	3.00	—	—	3.23	3.08	0.15
Superintendent	2.33	3.56	4.00	4.25	3.22	3.19	3.83	3.78	4.00	—	—	3.67	3.84	-0.17
Additional Services														
Audiologist	2.67	4.50	4.00	4.14	3.50	3.44	3.92	3.75	4.00	—	—	3.84	3.91	-0.07
Counselor	3.20	3.25	3.67	3.70	3.42	3.16	3.52	3.13	3.21	—	—	3.36	3.65	-0.29
Gifted/Talented Education	2.33	3.25	4.00	3.42	3.46	3.50	3.25	2.83	3.00	—	—	3.33	3.42	-0.09
Library Science/Media Tech.	3.25	3.00	3.50	3.93	3.25	3.59	3.71	3.83	2.00	—	—	3.60	3.88	-0.28
Occupational Therapist	3.00	3.00	4.00	3.50	3.50	3.00	3.38	2.90	5.00	—	—	3.36	3.30	0.06
Physical Therapist	3.00	3.50	4.33	3.78	3.67	3.20	3.64	3.00	4.00	—	—	3.48	3.36	0.12
School Nurse	3.33	3.55	3.67	3.59	3.33	3.18	3.33	3.36	3.71	—	—	3.44	3.71	-0.27
School Psychologist	3.40	3.50	4.17	3.69	3.13	3.37	3.71	3.55	3.00	—	—	3.52	3.73	-0.21
School Social Worker	3.00	2.78	3.25	3.53	3.40	3.26	3.54	2.62	3.33	—	—	3.26	3.48	-0.22
Speech Pathologist	3.67	4.27	4.50	3.87	3.50	3.69	4.05	3.89	4.00	—	—	3.91	4.02	-0.11
COMPOSITE	3.20	3.50	3.66	3.50	3.54	3.57	3.36	3.36	3.39	3.00	4.53	3.45	3.68	-0.23
Number of Participants	17	30	14	76	43	101	101	82	32	1	1	498*	467*	

* Questionnaires returned without indication of region computed in the national averages only. Total of regional participants does not equal national total.

the profession.” (Gursky, 2001, p.17) There is quantitative support for such arguments as well. The results of the 2000 AFT salary survey reported the average beginning teacher salary as \$26,639. When compared with the average starting salary for college graduates, \$37,194, it seems reasonable that raising salaries would assist in confronting the teacher shortage. As Randi Weingarten states, “Making sure that we have a well-qualified teacher in every classroom requires that we make the job attractive by paying competitive salaries” (Gursky, 2001, p. 18.) Other financial incentives could also assist in retaining and recruiting teachers. Signing bonuses could be used to recruit new teachers into classrooms. Some states, such as Massachusetts, have already put into place such actions. Other options include subsidized housing, tax credits, and low-interest mortgages.

Extending beyond financial means, improving working conditions and improving the image of teaching would most likely assist in retaining teachers and in turn attract new talent. To do this, professional development programs and teacher collaboration need to be supported (Darling-Hammond, 1997). The AFT offers other possible support including national job banks via the Internet to inform candidates of open positions and increased interactions with talented high school and college students (Gursky, 2001).

It is imperative for both educational researchers and college/university teacher

education programs to engage in research and then share their findings and recommendations with the educational community at large. Other problems associated with education become minuscule in the presence of a true teacher shortage and the inability to attract the best and brightest to the teaching profession.

Methodology of the AAEE Study

The 26th AAEE study of teacher supply and demand in the United States was conducted in 2002. The reports since 1994 have

included non-AAEE colleges and universities as well as AAEE members, more than doubling the number of institutions included in the data collection efforts. All institutions preparing teachers, as listed in the Higher Education Directory (HEP), were sent surveys in May 2002. Approximately one month after the initial survey mailing, a follow-up request and second survey was sent, color-coded. Additional surveys were faxed to colleges and universities who have responded within the past 3 years. Participants responded with data for each of the

Figure 1. AAEE Supply/Demand Regions

1=Northwest; 2=West; 3=Rocky Mountain; 4=Great Plains/Midwest; 5=South Central; 6=Southeast; 7=Great Lakes; 8=Middle Atlantic; 9=Northeast; 10=Alaska; 11=Hawaii



teaching fields for which their institutions prepared candidates.

A retrospective three-year longitudinal analysis was conducted on the three most current years of data. This AAEE annual study examines the availability of teachers from the supply side of universities and colleges. Periodically, a regional study of employers is conducted to help validate the responses of the colleges and universities. These studies were conducted in 1994, 1995 and 1997 in the SEASCUS, MAASCUS and GLASCUS regions respectively (Southeastern U.S., Middle Atlantic States, and Great Lakes States). These studies have consistently validated the data provided by representatives from colleges and universities.

Questions of the Study

The assumption of this national annual survey research is that the opinions and responses of university directors of career services, directly involved in the employment of education graduates, and of deans/directors of teacher education divisions throughout the U.S. accurately reflect the K-12 job market.

The major questions addressed in the 2002 study were:

- ❖ What was the relative supply and demand of educators in 64 teaching, administrative and support fields for the academic year 2001-2002, with a ranking from considerable shortage to considerable surplus of educators?
- ❖ What are the expectations of employment opportunities for the 2002-2003 academic year?
- ❖ What are the expectations regarding the increase or decrease in the number of minority candidates enrolling in education at the institutions surveyed?
- ❖ What are the additional issues or factors regarding teacher supply and demand on either a regional or national basis: funding, retirement, government mandates, demographic shifts in the population, changing teacher education enrollments, and mobility of new graduates and experienced teachers?
- ❖ What trends are there in supply and demand of teacher candidates across the years of 2000, 2001, and 2002?

The Study Sample

A survey instrument was mailed in May 2002 to 1,268 institutions of higher education that prepare teachers in the United States. Of this number, 537 were mailed to

institutional members of AAEE who are career services directors responsible for the career planning and placement of graduates in teacher education and related careers. The remaining 731 were mailed to deans and directors of teacher education in universities that are not members of AAEE (see Table 2). Usable questionnaires were received from 498; total responses received were 520. (A complete listing of the responding institutions by region is found in Appendix C of this report.)

The AAEE members returned 302 surveys for a return rate of 56 percent. Deans and directors of teacher education programs who are not AAEE members returned 218 surveys for a return rate of 29.8 percent. In total, the response rate was 41 percent. The responses were representative by response wave, and are slightly higher than the previous year's response rates. Information on the responding sample sizes by region and AAEE/non-AAEE member is contained in Table 2.

The AAEE member institutions produce at least 65 percent of the total annual number of newly prepared teachers. A large proportion of responding institutions came from five of the eleven regions (Regions 4, 5, 6, 7, and 8), which reinforces the idea that institutions from these parts of the country produce a disproportionate number of the teachers for the nation. Regions 6, 7, and 8 contain 57 percent of the nation's teacher education institutions.

Instrumentation

The instrument used in the 2002 survey was the same as 2001, with the addition of the field of elementary-middle school teaching and the partitioning of factors affecting education employment into supply and/or demand factors. Changes in 2001 and continued in 2002 included:

- separating speech/drama into separate categories of speech education and theater,
- adding general music,
- changing the nomenclature of special education (adding three additional response options),
- adding school administration areas including principalships at three school levels and central office positions (human resources, superintendent, curriculum director, and business manager), and
- adding three additional support areas (school nurse, physical therapist, and occupational therapist) to the previous three years' survey instruments.

These changes resulted in moving from

the original 48 teaching fields to 63 teaching, support, and administrative fields in 2001 and 64 fields in 2002.

The 2001 survey instrument contained the first major revision since 1993. The instrument was designed to collect information about employment opportunities for prospective elementary and secondary teachers and administrative/support positions. The 2002 survey added elementary-middle school to the areas of teaching fields.

The instrument also requested information on projected availability of minority candidates for the future academic year. These questions previously were asked for elementary and secondary fields; beginning with 2000, the survey added the fields of special education to both questions.

Finally, the instrument asked Likert-type items regarding factors likely to impact the employment of prospective educators. Beginning with the 2000 survey, four additional factors in the area of teaching environment were added: salaries, benefits, school violence and working conditions. The 2002 survey continued to add emphasis to the study of factors, by delineating whether each particular factor (e.g., retirement, class size, etc.) would affect supply, demand, or both.

Stability of Data Across Data Sets

For each of the 48 original teaching fields, the means for each survey and year (ASCUS 1995, AAEE 1996, AAEE 1997, AAEE 1998, AAEE 1999, AAEE 2000, 2001, and AAEE 2002, SEASCUS 1994, MAASCUS 1995, GLASCUS 1997) were compared. There was consistency among the 11 cohorts of respondents regarding fields with perceived shortage, surplus, and balanced conditions with respect to supply and demand. While some variation among the means was to be expected, the number of respondents for any one teaching field would influence the relative stability of the estimated mean. Of the 11 data sets, the number of respondents from MAASCUS 1995 was the least stable and tended to fluctuate more than either the national data or the SEASCUS and GLASCUS data (based on the number of respondents). There was strong agreement between the "suppliers" (AAEE responses) and the "demanders" (employers from SEASCUS, MAASCUS and GLASCUS).

Intraclass correlations were generated across the original 48 teaching fields for 11 data sets (ASCUS 1995, AAEE 1996, AAEE 1997, AAEE 1998, AAEE 1999, AAEE 2000, AAEE 2001, and AAEE

2002, SEASCUS 1994, MAASCUS 1995, and GLASCUS 1997). Intraclass correlations ranged from a low of .57 to a high of .99 with a median value of .92 (see Appendix A). The correlations based on reports from the suppliers across the years 1995 to 2002 had a low value of .83 and a high value of .99. The correlations across the years 1994, 1995 and 1997 based on the responses from the demand side (school districts) was a low of .90 to a high of .98. The data across years for ASCUS/AAEE are very stable from year to year. The same is true for the data from employers (SEASCUS 1994, MAASCUS 1995 and GLASCUS 1997). The correlations across years is higher for years that are closer in proximity to each other and becomes lower as time between samples increases.

Data Analyses

The data were analyzed by checking for representativeness of the return sample on the variables of AAEE/non-AAEE membership, regions, and response wave. The response sample was found to be representative by response wave, but not representative by region and AAEE/non-AAEE membership. Significantly more AAEE members returned the survey than non-AAEE members. This situation is not likely to adversely influence the reported data as the majority of teacher preparation institutions with high enrollments belong to AAEE. In addition, there were small differences in response rate by region, particularly for non-AAEE members.

AAEE members and non-members were compared across each of the 64 education fields with respect to perceived need for those fields. There were significant differences on three of the fields, with non-AAEE institutions indicating a higher perceived need for educators in these three fields. On most items, the perceptions of the AAEE and non-AAEE members were neither statistically different nor practically meaningful. Therefore, the responses from both AAEE and non-AAEE institutions were combined into an overall data set. The combined data set was then analyzed on a national basis as well as by region, using 11 regions identified by AAEE (see Figure 1). For each of the 64 fields, regional composites and averages were compiled to address the study questions identified above.

The number of responses differs by region, and caution should be exercised when interpreting data from some regions (e.g., regions 10 and 11 have few responses and may yield unstable values). Statistical analyses were conducted to see if percep-

Table 2
Response Rate

	Mailed	Valid Response	Percent
National			
Member	537	302	56.2
Non-member	731	218	29.8
Total	1268	520	41.0
Region 1			
Member	20	12	60.0
Non-member	19	6	31.6
Total	39	18	46.2
Region 2			
Member	32	19	59.4
Non-member	54	11	20.4
Total	86	30	34.9
Region 3			
Member	17	11	64.7
Non-member	12	6	50.0
Total	29	16	55.2
Region 4			
Member	96	58	60.4
Non-member	51	19	37.3
Total	147	77	52.4
Region 5			
Member	42	27	64.3
Non-member	82	19	23.2
Total	124	46	37.1
Region 6			
Member	65	29	44.6
Non-member	221	76	34.4
Total	286	105	36.7
Region 7			
Member	124	77	62.1
Non-member	84	32	38.1
Total	208	109	52.4
Region 8			
Member	106	50	47.2
Non-member	125	33	26.4
Total	231	83	35.9
Region 9			
Member	33	19	57.6
Non-member	76	15	19.7
Total	109	34	31.2
Region 10			
Non-member	1	1	100.0
Region 11			
Non-member	1	1	100.0

tions of the respondents differed between the 2000-2001, the 2001-2002, and the 2002-2003 academic years and opportunities for elementary, secondary, and special education teachers.

A standard error was calculated for each of the 64 respective education fields. These values had some variation because of differing sample sizes and different standard deviations. Most of these values hovered around a value of .10, and we have chosen

to use this value to indicate expected chance variation across each of the education fields. Therefore, when differences across years exceed the value of .10, we believe this difference represents a significant change.

2002 National and Regional Results

This study examined the perceptions of career service representatives responding to the 2002 AAEE survey. Data analyses yielded information about educator supply

Table 3

Relative Demand by Field

Fields with Considerable Shortage (5.00 - 4.21)		Fields with Balanced Supply and Demand (3.40 - 2.61)	
Emotional/Behavior Disorders	4.42	Business Manager	3.38
Severe/Profound Disabilities	4.35	Reading	3.37
Mathematics Education	4.28	Counselor	3.36
Physics	4.26	Occupational Therapist	3.36
Mental Retardation	4.26	Elementary – Middle	3.35
Mild/Moderate Disabilities	4.23	Agriculture	3.34
Learning Disability	4.21	Gifted/Talented Education	3.33
Fields with Some Shortage (4.20 - 3.41)		Languages – Classics	3.32
Chemistry	4.20	Languages – French	3.31
Multicategorical	4.20	Music – Instrumental	3.29
Visually Impaired	4.19	School Social Worker	3.26
Hearing Impaired	4.17	Music – Vocal	3.23
Bilingual Education	4.10	Music – General	3.23
Technology Education	4.02	Human Resources Director	3.23
Languages – Spanish	3.96	Languages – German	3.22
Earth/Physical	3.96	Speech Education	3.19
Dual Certificate (Gen./Spec.)	3.92	Curriculum Director	3.18
English as a Second Language	3.91	English/Language Arts	3.10
Speech Pathologist	3.91	Business Education	3.07
Biology	3.89	Elementary – Intermediate	3.03
Audiologist	3.84	Journalism Education	2.97
Early Childhood Special Education	3.82	Elementary – Pre-Kindergarten	2.95
General Science	3.81	Driver Education/Traffic Safety	2.94
High School Principal	3.72	Art/Visual Education	2.88
Superintendent	3.67	Elementary – Primary	2.88
Computer Science Education	3.65	Theatre/Drama	2.87
Middle School Principal	3.65	Elementary – Kindergarten	2.85
Library Science/Media Technology	3.60	Health Education	2.63
Elementary Principal	3.59	Social Studies Education	2.63
School Psychologist	3.52	Fields with Some Surplus (2.60 - 1.81)	
Physical Therapist	3.48	Physical Education	2.55
School Nurse	3.44	Dance Education	2.54
Languages – Japanese	3.44	Fields with Considerable Surplus (1.80 - 1.00)	
Home Economics/Consumer Science	3.42	None	

From data supplied by survey respondents. In some instances, the averages are based upon limited input and total reliability is not assured.

and demand across 64 education fields.

Respondents were asked to rate the job market for each field on a 5-point scale with “1” representing considerable surplus of candidates, “5” representing a considerable shortage of candidates, and “3” indicating a balanced job market. After the data were compiled and analyzed, the national average score for each teaching field was used to create categories as defined below. (See Tables 1 and 3 for national and regional data for each field.)

Considerable Shortage

Fields identified as having a considerable shortage of candidates are those fields in which there is an average demand score of 4.21 or greater on a 5-point scale. This year seven fields were in this category.

Mathematics and physics teachers continue to be in considerable demand. The number of candidates graduating with these certifications/licenses is limited and the opportunities for those who do are available

in settings more lucrative than education.

In general, fields in this category are either specialized or designed to meet students’ special needs. Teacher preparation programs tend to have smaller enrollments and job opportunities tend to be plentiful both within and outside of PK-12 education, which, in turn narrows the candidate pool.

A considerable shortage exists for fully certified special education teachers, due to identification of an increasing number of students as having special needs, the demand from parents, and the desire of the schools to meet those learning needs. This year considerable shortages were identified in the following special education areas: emotional/behavior disorder, learning disability, mental retardation, mild/moderate disabilities, and severe/profound disabilities. The continually changing certifications/licenses for teaching students with special needs exacerbate the shortages and challenge the teacher training institution’s ability to redesign and implement certification/

licensure programs to meet those needs.

Some Shortage

Fields identified as having some shortage of candidates are those fields in which there is an average demand score of 3.41 to 4.20 on a 5-point scale. This year 26 of the 64 fields fell in this category.

Fields in this category include Spanish, Japanese, bilingual education, English as a second language and several areas of science—biology, chemistry, earth/physical science and general science. Also included this year are several areas of special education—multi-categorical, hearing impaired, visually impaired, early childhood special education, and dual certification (general + special education).

Special services provided to students such as physical therapy, speech pathology, school psychology, audiology, and school nursing are also classified as having some shortage of candidates.

Several administrative areas are included

in this category. Superintendents and principals at all levels are identified as being in some shortage. The appeal of administrative positions is lessening due to ever-increasing demands of these positions, such as testing, state and federal accountability, and the decreasing differential in pay from that of an experienced teacher. At the same time, the administrative population is aging and reaching retirement eligibility. In response to this need, some districts, where permitted by state law to do so, are allowing administrators to retire and return immediately to the same position, thereby drawing both a pension and their full salary. Additionally some states have passed legislation that makes it easier to hire non-traditional candidates (i.e., from business, industry, or the military) as superintendents and principals.

Balanced Supply and Demand

Fields identified as having balanced supply and demand of candidates are those fields in which there is an average demand score of 2.61 to 3.40 on a 5-point scale. For candidates and employers this represents a reasonably optimistic situation. Candidates have a reasonable expectation of obtaining a desirable position, and employers can be reasonably confident that they will be able to find qualified candidates.

Areas in the “Balanced” category include fields such as all ranges of elementary education, English/language arts, and social studies. These are fields that require large numbers of candidates. A number of areas that have fewer candidates, such as foreign languages, including French, German, and classical languages also have fewer teachers employed in these fields, resulting in a balance. Similarly, business education, all types of music education, speech, and theater/drama are balanced due to the low supply being able to meet the demand nationally.

Several areas that serve the needs of a special portion of the population are in the balanced category. These include occupational therapist, social worker, and teacher of the gifted. Counselor supply and demand is also balanced.

In the administrative fields, human resources administrators and business managers fall within the balanced category nationally.

Some Surplus

Fields identified as having some surplus of candidates are those fields in which there is an average demand score of 1.81 to 2.60 on the 5-point scale. Last year, for the first time, this category was empty. This year,

there are two fields.

This category has historically included fields where many institutions offered training programs and large numbers of candidates were enrolled such as social studies, elementary education and physical education. This year physical education and dance education (which traditionally has a very small number of candidates and also a small demand) fall within this category.

Considerable Surplus

Fields identified as having considerable surplus of candidates are fields in which there is an average demand score of 1.00 to 1.80 on the 5-point scale.

This is the seventh consecutive year that no fields have fallen within this category.

Changes from the Previous Year

Using a difference of .10 or greater in the national composite score as an indication of change from the previous year, there are 52 fields exhibiting such a change. Fifty of those fields indicate a decrease from the previous year. Special education-early childhood declined .53 and moved from the considerable shortage to some shortage category. Special education-dual certification reported a decrease of .45. Human resources and physical therapy were the only fields indicating increased demand at the .10 level.

Eleven fields reported decreases in excess of .30. These include computer science, all four elementary categories, English as a second language, instrumental and vocal music, and special education-multi-categorical.

The reduction in reported shortages moved 21 fields from one category to the next lower demand category. The fields of bilingual education, English as a second language, and chemistry moved from Considerable Shortage to Some Shortage. Additionally the special education fields of multi-categorical, hearing impaired, visually impaired, early childhood special education, and dual certification (general and special education) moved from considerable shortage to some shortage.

Fields that moved from some shortage to balanced supply and demand included agriculture, the three areas of music—instrumental, vocal and general, and reading. Additionally speech education, curriculum director, counselor, gifted/talented, physical therapist and social work were reported in the Balanced category this year.

Only the fields of dance education and physical education moved from the balanced

supply and demand category to some surplus.

The composite ranking for 2002 was 3.45. The 2001 composite was 3.68. Both fall within the “Some Shortage” category.

National Three-Year Trend Data

This year, AAEE also examined three-year trend data from 2000 to 2002 for 62 fields where data were available for all three years. Of these 62 fields, 52 showed a “0” trend, indicating that the means for the three years had moved in different directions. Only three fields (occupational therapist, physical therapist and business manager) indicated a “+” direction over the three years. Eight fields (bilingual education, computer science, dance, French, home economics/consumer science, mild/moderate disabilities, technology education, and gifted/talented) moved in negative trend over the three years.

In 49 of the 62 fields, the data from 2001 were the highest. Overall, the composite rose .12 from 2000 to 2001, but fell by .23 to 3.45 in 2002. This indicates once again that the 2002 research shows a softening of the market; however the composite of 3.45 continues to be in the category of “some shortage.”

A Scheffe post-hoc analysis was conducted on those fields where a significant difference was found. These differences are Table 4 on page 10. Letter designations show which years differ significantly. There were 62 fields for which significance could be measured between 2000 and 2002 data. Thirty-seven fields had no significant difference across the three years. There were significant differences on 25 of the 62 fields with 22 fields reflecting that 2001 was the peak year of the three, two fields peaked in 2000, and one field was the same in 2000 and 2001. Only three fields had their highest values in 2002: occupational therapist, physical therapist, and business manager, but these differences were non-significant.

Overall, the national composite ranking of the education fields has remained relatively stable throughout the three-year period, with each composite continuing to fall within the category of some shortage. However, the national composite and the teaching field composites mask the variations of selected fields across regions. Additionally, the variations within a region with respect to demand in urban, suburban, and rural school settings are not addressed.

Table 4
National Three-Year Trends

Field	2002	2001	2000	Three-Year Trend				One-Year Change	Significance
				2002	2001	2000			
Agriculture	3.34	3.69	3.43	L	H	M	0	-35	
Art/Visual Education	2.88	2.99	2.90	L	H	M	0	-11	
Bilingual Education	4.10	4.29	4.38	L	M	H	-	-19	
Business Education	3.07	3.28	3.23	L	H	M	0	-21	
Computer Science Education	3.65	3.98	4.23	L	M	H	-	-33	B
Dance Education	2.54	2.82	2.85	L	M	H	-	-28	
Driver Education Traffic Safety	2.94	2.95	2.86	M	H	L	0	-01	
Elementary Pre-K	2.95	3.26	3.17	L	H	M	0	-31	B
Elementary - Kindergarten	2.85	3.22	3.06	L	H	M	0	-37	B
Elementary - Primary	2.88	3.21	3.02	L	H	M	0	-33	B
Elementary - Intermediate	3.03	3.35	3.22	L	H	M	0	-32	B
Elementary - Middle School	3.35								
English/Language Arts	3.10	3.28	3.25	L	H	M	0	-18	B
English as a Second Lang	3.91	4.24	4.19	L	H	M	0	-33	B
Health Education	2.63	2.67	2.56	M	H	L	0	-04	
Home Ec/Consumer Science	3.42	3.51	3.52	L	M	H	-	-09	
Journalism Education	2.97	3.07	2.99	L	H	M	0	-10	
Languages - Classics	3.32	3.31	3.34	M	L	H	0	+01	
Languages - French	3.31	3.36	3.41	L	M	H	0	-05	
Languages - German	3.22	3.27	3.25	L	H	M	0	-05	
Languages - Japanese	3.44	3.54	3.52	L	H	M	0	-10	
Languages - Spanish	3.96	4.17	4.16	L	H	M	0	-21	B
Mathematics Education	4.28	4.55	4.44	L	H	M	0	-27	B
Music - Instrumental	3.29	3.61	3.53	L	H	M	0	-32	B
Music - Vocal	3.23	3.59	3.47	L	H	M	0	-36	B
Music - General	3.23	3.48	3.38	L	H	M	0	-25	C
Physical Education	2.55	2.72	2.60	L	H	M	0	-17	
Reading	3.37	3.51	3.48	L	H	M	0	-14	
Science - Biology	3.89	4.10	4.04	L	H	M	0	-21	B
Science - Chemistry	4.20	4.42	4.36	L	H	M	0	-22	B
Science - Earth/Physical	3.96	4.14	4.08	L	H	M	0	-18	C
Science - Physics	4.26	4.43	4.40	L	H	M	0	-17	C
Science - General	3.81	4.04	3.91	L	H	M	0	-23	C
Social Studies Education	2.63	2.75	2.73	L	H	M	0	-12	
Spec. Ed. - Multicategorical	4.20	4.53	4.53	L	H	H	0	-33	B
Spec. Ed. - Emotional/Beh. Dis.	4.42	4.66	4.59	L	H	M	0	-24	C
Spec. Ed. - Hearing Impaired	4.17	4.41	4.37	L	H	M	0	-24	
Spec. Ed. - Learning Disability	4.21	4.47	4.46	L	H	M	0	-26	B
Spec. Ed. - Mental Retardation	4.26	4.49	4.44	L	H	M	0	-23	
Spec. Ed. - Visually Impaired	4.19	4.48	4.38	L	H	M	0	-29	
Spec. Ed. - Mild/Moderate Disabilities	4.23	4.44	4.45	L	M	H	-	-21	SIG
Spec. Ed. - Severe/Profound Dis.	4.35	4.59	4.51	L	H	M	0	-24	
Spec. Ed. - Early Childhood Spec. Ed.	3.82	4.35	4.20	L	H	M	0	-53	B
Spec. Ed. - Dual Cert. (Gen./Spec.)	3.92	4.37	4.23	L	H	M	0	-45	B
Speech Education	3.19	3.45	3.33	L	H	M	0	-26	
Technology Education	4.02	4.11	4.17	L	M	H	-	-09	
Theatre/Drama	2.87	2.99	2.82	M	H	L	0	-12	
Administration:									
Principal - Elementary	3.59	3.74	3.68	L	H	M	0	-15	
Principal - Middle School	3.65	3.84	3.74	L	H	M	0	-19	
Principal - High School	3.72	3.90	3.75	L	H	M	0	-18	
Business Manager	3.38	3.36	3.25	H	M	L	+	+02	
Curriculum	3.18	3.44		L	H		-	-26	
Human Resources Director	3.23	3.08	3.29	M	L	H	0	+15	
Superintendent	3.67	3.84	3.80	L	H	M	0	-17	
Support Services									
Audiologist	3.84	3.91	3.71	M	H	L	0	-07	
Counselor	3.36	3.65	3.62	L	H	M	0	-29	B
Gifted/Talented Education	3.33	3.42	3.56	L	M	H	-	-09	
Library Science/Media Tech.	3.60	3.88	3.80	L	H	M	0	-28	
Occupational Therapist	3.36	3.30	3.10	H	M	L	+	+06	
Physical Therapist	3.48	3.36	3.29	H	M	L	+	+12	
School Nurse	3.44	3.71	3.37	M	H	L	0	-27	D
School Psychologist	3.52	3.73	3.65	L	H	M	0	-21	
School Social Worker	3.26	3.48	3.47	L	H	M	0	-22	
Speech Pathologist	3.91	4.02	4.02	L	H	H	0	-11	
Composite	3.45	3.68	3.56	L	H	M	0	-23	
N	498	467	465						

Projected Availability of Education Employment Opportunities

Table 5 displays responses to the question: "As compared to 2001-2002, how do you expect employment opportunities to be for elementary, secondary, and special education teachers for the approaching 2002-2003 school year?" At the elementary level, approximately half of the respondents (45.2%) reported that employment opportunities would be the "same." On the other hand, at the secondary level and in the special education field, more than half of the respondents (54.8%, 75.2% respectively) reported their expectations to be "greater" or "much greater."

Availability of Minority Candidates

As is displayed in Table 6 on page 12, in answer to the question of whether colleges/universities expected to see an increase or decrease in the number of minority teacher candidates in 2002 when compared to 2001, two-thirds (66.7%) of the respondents in the 11 national reporting regions said that they anticipated "no change." One-fifth (19.9%) of the respondents indicated that they estimated an increase of 1-5% in available minority candidates. Nationally, nearly one-quarter (24.5%) of the respondents thought they would see some level of increase, whereas only 8.2% projected a decrease.

Region 3 (Rocky Mountain) reflected the most positive possibilities in increasing the number of minority teacher education candidates, with a percentage of 43.8% in numbers of elementary candidates, 35.7% in special education candidates, and 31.3% in secondary candidates. The most significant decreases were expected in Region 5 (South Central), at 15.5% (special education), 15.2% (elementary) and 13.0% (secondary).

In considering the data for the availability

Table 4 Key

4.21-5.00 = Considerable Shortage
 3.41-4.20 = Some Shortage
 2.61-3.40 = Balanced
 1.81-2.60 = Some Surplus
 1.00-1.80 = Considerable Surplus

Three-Year Trend

"+" = all three years upward
 "-" = all three years downward
 "0" = three years in different directions
 L=Low Year; M=Middle Year; H=High Year

Significance

B = 2000 > 2002 and 2001 > 2002
 C = 2001 > 2002
 D = 2001 > 2000
 SIG = significance, but not one particular year
 Blank = no significance

Table 5

Projections of Availability of Teaching and Education-Related Employment Opportunities for 2002-2003 Based on Current Year (2001-2002)

		Elementary					Total
		Much Better	Better	Same	Worse	Much Worse	
National	n	26	155	229	84	13	507
	%	5.1	30.6	45.2	16.6	2.6	100.0
		Secondary					Total
		Much Better	Better	Same	Worse	Much Worse	
National	n	55	222	178	46	5	506
	%	10.9	43.9	35.2	9.1	1.0	100.0
		Special Education					Total
		Much Better	Better	Same	Worse	Much Worse	
National	n	155	196	106	10	0	467
	%	33.2	42.0	22.7	2.0	0.0	100.0

of minority candidates, the most important finding is that there have been no expectations of significant increases. A majority of respondents in all three categories do not expect to see an increase in the number of minority candidates enrolling in teacher education programs. It is evident that expectations for growth in the number of minority *teachers* lag far behind expected growth in the number of minority *students* in schools across the nation.

Program Offerings and Graduates

Program offerings and teaching fields perceived to be in balance or in surplus are shown in the Table 7 on page 13. Teaching fields perceived previously among those in the surplus category that are now perceived as balanced fields include: English/language arts, pre-kindergarten, elementary-intermediate, and elementary primary. In previous years, teaching fields in surplus categories were often produced from a high number of colleges (i.e., elementary-primary offered by approximately 94.9% of respondents).

The table also shows program offerings and graduates in selected teaching fields perceived to have the greatest demand. These fields include: speech pathology, bilingual education, emotionally disturbed/behavior disorders, hearing impaired, learning disabilities and mental retardation. Historically, these teaching fields have ranked among those fields with the greatest shortages. Shortage fields historically have been offered at fewer colleges, ranging from 15.3% for hearing impaired to 23.4% for bilingual education.

Since values fluctuate from year to year depending upon responding institutions, caution should be exercised when interpreting data related to changes in program

offerings and production of graduates. However, these data should be scrutinized judiciously as teaching fields continue to reflect greater shortages.

Issues of Supply and Demand Related to the Special Education Professions

The need for special education professionals continues to climb, as the data from this year's report indicate that nationally, about 75% of the survey participants consider the need for special education professionals to be greater or much greater than last year. Regionally, the need is most severe in Region 6, where 88% of the 103 respondents ranked the need of special educators as greater or much greater, followed by Region 9, where 86% of the 34 respondents ranked the need of special educators as greater or much greater, and Region 5, where 83% of the 46 respondents ranked the need of special educators as greater or much greater. Only Regions 1, 2, and 4 fell below the national average, with 47%, 60% and 60% of their respondents reporting that the need for special educators is as greater or much greater this year.

Compared with the regional reports for all areas of education, it appears that the need for special educators does not follow the same pattern as the need for educators in general. The regions that report the greatest need in general are not the same regions that report the greatest change in need for special educators, and the same is true for those regions reporting the least change in need for educators in general. Those are not the regions with the least need for educators in general. Therefore, it might be assumed that the need for special education professionals is unique to particular areas of the country that may not be

Table 6**Availability of Minority Candidates**

In general, do you expect to see an increase or decrease in the number of minority teacher candidates this year as compared to last year in teaching fields offered by your institution.

Elementary							
	+10%	+6-9%	+1-5%	No Change	-1-5%	-6-9%	-10%
National 2002	1.6	3.6	22.8	63.7	5.4	2.2	0.8
National 2001	2.1	2.8	21.2	67.5	4.7	0.6	1.1
National 2000	2.4	3.9	19.3	67.2	5.8	0.6	0.9
National 1999	3.2	4.3	18.1	64.7	8.1	0.4	1.1
National 1998	5.1	6.5	19.4	58.0	8.5	0.9	1.6
National 1997	4.3	4.9	24.3	57.6	7.2	0.4	1.3
National 1996	3.6	3.8	27.1	55.9	5.8	1.6	1.6
Region 1			17.6	76.5	5.9		
Region 2	3.3	10.0	23.3	63.3			
Region 3		12.5	31.3	50.0	6.3		
Region 4	1.4	1.4	6.8	77.0	9.5	2.7	1.4
Region 5	4.3	6.5	30.4	43.5	10.9	4.3	
Region 6	2.9	8.8	26.5	52.9	2.9	3.9	2.0
Region 7			23.1	68.3	6.7	1.9	
Region 8	1.3		28.8	63.8	3.8	1.3	1.3
Region 9			18.2	81.8			
Region 10			100.0				
Region 11				100.0			
Secondary							
	+10%	+6-9%	+1-5%	No Change	-1-5%	-6-9%	-10%
National 2002	1.2	3.0	19.7	68.0	5.0	2.0	1.2
National 2001	1.5	2.7	20.0	68.1	4.6	1.3	1.7
National 2000	2.4	3.2	19.0	67.6	5.6	0.9	1.3
National 1999	2.6	2.4	15.6	68.5	8.4	1.1	1.3
National 1998	3.7	5.7	17.0	64.2	7.1	0.9	1.5
National 1997	2.9	3.7	20.6	63.7	7.0	0.6	1.5
National 1996	3.6	3.4	23.1	61.4	4.6	2.0	1.8
Region 1			11.8	82.4	5.9		
Region 2	3.4	3.4	17.2	72.4	3.4		
Region 3		12.5	18.8	62.5		6.3	
Region 4	1.4		8.1	78.4	8.1	1.4	2.7
Region 5	4.3	4.3	30.4	47.8	6.5	6.5	
Region 6	2.0	6.0	23.0	59.0	5.0	3.0	2.0
Region 7			17.3	76.0	5.8	1.0	
Region 8		3.6	21.4	67.9	3.6	1.2	2.4
Region 9		3.2	29.0	67.7			
Region 10			100.0				
Region 11				100.0			
Special Education							
	+10%	+6-9%	+1-5%	No Change	-1-5%	-6-9%	-10%
National 2002	1.8	2.5	17.2	70.6	3.6	2.3	2.0
National 2001	1.3	2.5	11.5	78.5	3.2	0.9	1.6
National 2000	2.6	1.7	12.0	74.4	6.7	1.0	1.7
Region 1			5.9	88.2	5.9		
Region 2	3.8		15.4	76.9	3.8	7.1	
Region 3		7.1	28.6	57.1		6.3	
Region 4			4.4	85.3	5.9	1.5	2.9
Region 5	4.4	8.9	20.0	51.1	4.4	6.7	4.4
Region 6	5.7	2.3	25.3	58.6	1.1	3.4	3.4
Region 7		3.4	14.8	76.1	4.5	1.1	
Region 8		1.4	21.7	69.6	2.9	1.4	2.9
Region 9			18.5	81.5			
Region 10	No response						
Region 11				100.0			

Question was not asked about special education specifically in years prior to 2000.

experiencing the same need for general educators, and those areas that are in need of general educators may not have as severe a need for special educators.

In contrast to this set of data, however, is another set that indicates that while the need for special educators to serve students with varying kinds of disabilities has remained the highest of all the categories, there has been a drop in each of the disability areas, comparable with a similar drop in all other areas, this year. Regardless of the drop, however, teachers of students with emotional disabilities are still in greater need than any other area (4.42), followed by teachers of students with severe and profound disabilities (4.35), mental retardation (4.26), mild moderate disabilities (4.23), and learning disabilities (4.21), respectively.

According to this same set of data, on the average, need for special education dropped about .26 points on the survey's 5 point scale, with the exception of two categories—early childhood and dually certified teachers of students with disabilities—which dropped .53 and .46 points, respectively. Whether or not the larger drop in these two categories is an indication of greater supply of lesser demand is not clear.

Overall, then, while the need is still most significant for all areas of special education, there does appear to be a greater supply of minorities in the professional pipeline.

Some of the questions these data raise are:

- Is the increase in opportunities for minorities to enter the field of special education through alternative routes making a significant impact on the supply in some regions?
- Are there actually more special education candidates graduating from teacher education programs or are alternative path programs producing more special education certified teachers, such as the case in Texas, where alternative programs now produce more special educators in the state than traditional, university based programs.

Table 7

Selected Teaching Fields With Shortages and Surpluses Relative to Program Offerings and More, Same, or Fewer Graduates

Does your institution offer this curriculum? If yes, how does the number of graduates in 2002 compare with one year earlier?

Field	Year	Program Offered					Graduates						
		Yes	%	No	%	Total	Greater	%	Same	%	Fewer	%	Total
Shortage Fields													
Speech Pathology	00-01	115	24.0	364	76.0	479	11	17.2	45	70.3	8	12.5	64
	01-02	98	19.2	412	80.8	510	10	11.9	60	71.4	14	16.7	84
Bilingual Education	00-01	116	24.0	368	76.0	484	16	17.0	51	54.3	27	28.7	94
	01-02	120	23.4	393	76.6	513	26	25.5	65	63.7	11	10.8	102
Special Education													
Behavior Disorders	00-01	157	32.8	322	67.2	479	29	23.8	72	59.0	21	17.2	122
	01-02	149	29.3	360	70.7	509	21	17.5	73	60.8	26	21.7	120
Hearing Impaired	00-01	86	17.9	393	81.9	480	16	22.5	41	57.7	14	19.7	71
	01-02	78	15.3	431	84.7	509	15	21.1	37	52.1	19	26.8	71
Learning Disabled	00-01	196	41.1	281	58.9	477	35	22.0	89	56.0	34	21.4	159
	01-02	175	34.3	335	65.7	510	28	19.4	86	59.7	30	20.8	144
Mentally Handicapped	00-01	133	27.9	344	72.1	477	28	25.2	65	58.6	17	15.3	111
	01-02	125	24.5	385	75.5	510	18	18.0	63	63.0	19	19.0	100
General Science	00-01	322	67.1	158	32.9	480	50	20	173	69.2	27	10.8	250
	01-02	341	66.6	171	33.4	512	84	12.1	191	68.0	56	19.9	281
ESL	00-01	155	32.2	326	67.8	481	16	12.8	79	63.2	30	24	125
	01-02	171	33.5	340	66.5	511	32	21.6	83	56.1	33	22.3	148
Physics	00-01	342	71.4	137	28.6	479	71	26.2	170	62.7	30	11.1	271
	01-02	342	66.9	169	33.1	511	32	11.2	169	59.1	85	29.7	286
Spanish	00-01	353	73.4	128	26.6	481	54	19.3	175	62.5	51	18.2	280
	01-02	347	67.8	165	32.2	512	56	18.7	176	58.9	67	22.4	299
Earth/Physical Science	00-01	313	64.9	169	35.1	482	50	20.8	161	67.1	29	12.1	240
	01-02	316	61.7	196	38.3	512	30	11.5	165	63.5	65	25.0	260
Mathematics	00-01	442	91.7	40	8.3	482	100	29.4	180	52.9	60	17.6	340
	01-02	446	86.9	67	13.1	513	79	21.0	199	52.9	98	26.1	376
Biology	00-01	440	91.1	43	8.9	483	72	21.1	213	62.5	56	16.4	341
	01-02	459	89.3	55	10.7	514	53	13.6	287	60.6	98	28.4	345
Chemistry	00-01	400	83	82	17	482	79	25.4	187	60.1	45	14.5	311
	01-02	407	79.3	106	20.7	513	38	11.0	209	60.6	98	28.4	345
Balanced/Surplus Fields													
English	00-01	418	86.9	63	13.1	481	48	14.7	233	71.5	45	13.8	326
	01-02	460	89.7	53	10.3	513	74	18.8	266	67.5	54	13.7	394
Elementary													
Pre-kindergarten	00-01	331	68.7	151	31.3	482	28	10.7	170	64.9	64	24.4	262
	01-02	329	64.4	182	35.6	511	87	29.7	179	61.1	27	9.2	293
Intermediate	00-01	438	90.9	44	9.1	482	48	14.0	219	63.8	76	22.2	343
	01-02	446	86.9	67	13.1	513	113	28.7	231	58.6	50	9.7	394
Primary	00-01	455	94.4	27	5.6	482	44	12.2	228	63.2	89	24.7	361
	01-02	487	94.9	26	5.1	513	144	33.6	246	57.3	39	9.1	429
Health Education	00-01	225	47.0	254	53.0	479	30	16.0	140	74.9	17	9.1	187
	01-02	220	42.8	294	57.2	514	27	13.8	140	71.8	28	14.4	195
Social Studies	00-01	433	89.8	49	10.2	482	48	14.5	235	71.0	48	14.5	331
	01-02	436	85.2	75	14.6	511	82	21.9	253	67.5	40	10.7	375
Physical Education	00-01	306	63.5	175	36.3	482	31	13.0	169	70.7	39	16.3	239
	01-02	319	62.1	195	37.9	514	59	21.9	183	67.8	28	10.4	270
Dance Education	00-01	43	8.9	439	91.1	482	7	18.9	26	70.3	4	10.8	37
	01-02	43	8.4	468	91.6	511	3	8.3	27	75.0	6	16.7	36
Art/Visual Education	00-01	268	55.5	215	44.5	483	32	14.3	164	73.2	28	12.5	224
	01-02	293	57.2	219	42.8	512	34	12.9	200	76.0	29	11.0	263

Factors

The 2002 survey asked respondents to rate whether specific factors had positive or negative influences on the number of teachers to be hired. Respondents shared perceptions on factors ranging from school funding to legislative mandates to teaching environments. Unlike previous surveys, the 2002 survey divided the factors of funding, retirement, and legislative mandates into “supply” and “demand.” Respondents rated the impact of these factors on the supply of teachers as well as on the demand that schools have for teachers. The previous factor of changing teacher education enrollments was divided into three factors: increasing teacher education enrollments, decreasing teacher education enrollments, and distance learning teacher education. Several new factors were added for 2002: hiring of retirees, alternative certification / licensure, foreign-prepared teachers, economic conditions, and personal career shifts. The issue of military demobilization was eliminated. In total, the 2002 survey reported on 33 factors while the 2001 survey included 22 factors.

The results of this year’s survey are displayed in Tables 8 and 9 using a scale ranging from “5” (significant positive influence) to “3” (no influence) to “1” (significant negative influence). Two factors, postponed retirement-demand and foreign-prepared teachers, were rated at “3.” Fourteen factors were rated as positive influences on teacher hiring ranging from 3.01 (federal funding-demand) to 3.58 (increasing teacher education enrollments). Seventeen (17) factors were rated as negative influences on teacher hiring ranging from 2.99 (federal mandates-demand) to 2.32 (school violence). When the “no influence” rating is increased to include a range of 2.95 to 3.05, six (6) factors fall into this area indicating that the majority of factors were rated as having an either positive or negative influence. Of the six factors in the expanded “no influence” range, perhaps the most interesting one is class size, rated a positive influence of 3.33 in 2000, and 3.24 in 2001 before falling to 3.02 in 2002. The national average of 3.02, however, masks marked regional differences. In Regions 2 and 8, class size was still a positive influence on teacher hiring (3.22 and 3.21 respectively), while in Region 4, class size was a negative influence (2.69).

Nationally, the new factor of increasing teacher education enrollments was rated the highest positive influence at 3.58. As in years past, early retirement-demand was a positive influence at 3.44. As with class size,

however, this national rating has dropped from a high of 3.72 in 2000 to the current 3.44, indicating that early retirements incentives have moderated over the past four years. Among the regions, Region 7 (3.97) and Region 8 (3.78) reported early retirement-demand as the most positive influence.

By far, school violence was the most negative influence on teacher hiring at 2.32. Respondents in every region perceived school violence as a distinct negative influence with averages ranging from 2.06 (Region 3) to 2.44 (Region 4).

The second lowest national factor was working conditions at 2.49. Although rated as a rather moderate negative influence of 2.94 in Region 1, the other regions were distinctly negative in their ratings ranging from 2.33 (Region 6) to 2.65 (Region 9).

One factor often cited as a reason why college graduates may not pursue teaching careers is teacher salaries. The 2002 survey results confirmed teacher salaries as a negative influence on teacher hiring with a national average of 2.67. Interestingly, Region 8 rated teacher salaries as a positive influence at 3.36. However, the ratings from the other regions ranged from 2.13 (Region 3) to 2.66 (Region 6), indicating teacher salaries as a consistently negative influence, except for Region 8.

The 2002 survey results illustrated how state funding and state mandates significantly impact teacher hiring—much more so than federal funding and mandates. Unfortunately, the impact of the three state factors was a negative national average: state funding-supply (2.81), state funding-demand (2.69), and state mandates-supply (2.71). Across the regions, each of these factors was rated as a negative influence except for a few isolated averages indicating “no influence”: Region 9 rated state funding-supply as a 3.00; Region 6 rated state mandates-demand as a 3; and Region 5 rated state funding-demand as a 3.03. Grouping these three state factors together, Region 6 rated these factors as having the least influence: 2.95 for state funding-supply; 2.97 for state funding-demand; and 3 for state mandates-demand. Region 4 results showed these three state factors as being the most negative: 2.48 for state funding-supply; 2.12 for state funding-demand; and 2.47 for state mandates-supply. Local funding tended to follow the trend of state funding across the regions except in Region 5, where local funding-supply (3.08) was slightly positive while state funding-supply (2.87) was rather negative. Despite the positive influence of local fund-

ing in Region 5, teacher salaries were rated at 2.49, a distinct negative influence.

Since the rating among regions, and even within regions when comparing similar factors, can vary, the regional averages are reported in Table 9. Please note that since Regions 10 and 11 had just one respondent each, the results from these regions are not included in the observations above.

Conclusions and Recommendations

This year was different from previous years of research. Looking at the past three years, 2002 was lower in demand than the previous two years. However, the negative change for 2002 does not necessarily signal a long-term trend. All the factors that originally led to the predictions for increased needs for educators continue to exist: class size, student enrollment growth, and educator retirements, to name a few.

Initial optimism reflected in the 2001 report has been tempered by the unexpected economic downturn that affected all aspects of society and ultimately affected education through state and local budget reductions.

The 2003 research will need to focus on the trends seen in 2001-2003 in order to determine the future for educator supply and demand.

Research does not show that there is a dramatic increase in the supply of educators. Some institutions are still capping enrollments in teacher education programs due to university budgets and program priorities. There are a few new sources for the supply side: alternative certification, rehiring retirees, people leaving business positions in favor of positions with more perceived stability, volatility of the economy, and layoffs with perhaps previously-certified teachers coming back to teaching.

The demand for educators peaked in 2001 and softened in 2002. The perceived need is as great or greater, but overall hiring is down due to the soft economy and changes in staffing practices (hiring out-of-field, on-the-job certification, or alternative certification).

Recommendations for Further Study *Licensure Issues*

Standards are vital for creating a professional education workforce; however, standards are being designed state-by-state, creating a variety of issues surrounding both the quantity and quality of educators. Educators relocating from one state to another may find difficulties in transferring their licenses or certificates. With states developing higher and higher standards for educa-

Table 8**Factors Affecting Educator Supply and Demand – National Frequency and Means**

5 = Significant Positive Influence; 4 = Moderate Positive Influence; 3 = No Influence; 2 = Moderate Negative Influence; 1 = Significant Negative Influence

	Positive Sig + 5	Mod + 4	No Infl 3	Mod - 2	Negative Sig - 1	2002 Avg	2002 N	2001 Avg	2000 Avg
Finances									
Federal Funding (Supply)	36	98	227	83	19	3.11	463	3.19	3.25
State Funding (Supply)	48	91	125	129	73	2.81	466	3.05	3.23
Local Funding (Supply)	44	72	184	105	56	2.88	461	3.06	3.12
Federal Funding (Demand)	35	93	168	98	30	3.01	424		
State Funding (Demand)	47	77	86	134	86	2.69	430		
Local Funding (Demand)	36	69	124	123	71	2.71	423		
Retirement									
Postponed Retirement (Demand)	24	102	168	108	20	3.00	422	3.08	3.00
Routine Retirement (Demand)	38	162	150	64	14	3.34	428	3.57	3.61
Early Retirement (Demand)	54	160	145	52	15	3.44	426	3.68	3.72
Hiring of Retirees (Supply)	18	87	240	46	13	3.13	404		
Legislative Mandates									
State Mandates (Supply)	41	66	139	129	75	2.71	450	3.05	3.22
Federal Mandates (Supply)	31	58	217	95	44	2.86	445	3.06	3.18
State Mandates (Demand)	33	87	126	107	47	2.88	400		
Federal Mandates (Demand)	30	78	178	80	31	2.99	397		
Demographic Shifts in Population									
Limited English Proficient Students (Demand)	47	129	164	83	15	3.25	438	3.23	3.20
Rural/Suburban/Urban Shifts - Teachers (Demand)	15	90	237	85	10	3.03	437	3.06	3.01
Rural/Suburban/Urban Shifts - Students (Demand)	20	97	230	79	10	3.09	436	3.12	3.08
Student Enrollment (Demand)	32	151	139	100	19	3.17	441	3.37	3.32
Private Schools/Home Schooling (Demand)	8	61	257	107	8	2.90	441	2.90	2.88
Class Size (Demand)	25	123	154	117	23	3.02	442	3.24	3.33
Military Demobilization						2.97	3.01		
Teaching Environment									
Teacher Salaries (Supply)	47	93	85	169	90	2.67	484	2.81	2.75
Teacher Benefits (Supply)	49	103	148	136	47	2.94	483	3.01	2.93
School Violence (Supply)	11	27	150	213	82	2.32	483	2.30	2.30
Working Conditions (Supply)	16	55	143	213	60	2.49	487	2.51	2.50
Teacher Education At My Organization									
Mobility of New Graduates (Supply)	39	113	137	150	46	2.89	485	3.01	2.98
Mobility of Experienced Teachers (Supply)	18	92	187	133	45	2.80	475	2.91	2.89
Changing Teacher Education Enrollments						2.98	3.02		
Increasing Teacher Ed. Enrollments (Supply)	54	168	117	35	10	3.58	384		
Decreasing Teacher Ed. Enrollments (Supply)	9	17	70	53	13	2.73	162		
Demographic Changes in Applicant Pool									
Alternative Certification/Licensure (Supply)	49	169	174	68	11	3.38	471		
Foreign-prepared Teachers (Supply)	5	53	346	44	10	3.00	458		
Distance Learning Teacher Education (Supply)	18	102	294	31	11	3.19	456		
Economic Conditions (Supply)	23	138	112	162	35	2.90	470		
Personal Career Shifts (Supply)	35	196	162	63	12	3.38	468		

tors, are they creating excessive barriers for individuals who want to enter the field?

There continues to be a paradox of designing higher standards for professionally prepared educators and yet creating loopholes for out-of-field placements or temporary licensure for those without any teacher training.

When it comes to the reality of staffing the public schools, are new licensure standards appropriate and realistic? The more that standards become restrictive or highly

specialized, the more difficult it becomes for educators to complete their preparation programs within a reasonable period of time and enter the job market. Often, standards do not take into account the reality of how schools are organized and staffed, perhaps, in some cases, limiting the flexibility of placing educators in particular grade levels or teaching areas.

Federal Issues

“No Child Left Behind” legislation and implementation will have a tremendous impact on supply and demand. School districts must report to parents whether teachers are highly qualified, qualified, etc.; however, the states can make their own guidelines, and these will vary from state to state. Teachers moving across state lines may have different levels of “qualification” that they meet or don’t meet.

Table 9**Factors Affecting Educator Supply and Demand – Regional Means**

5 = Significant Positive Influence; 4 = Moderate Positive Influence; 3 = No Influence; 2 = Moderate Negative Influence; 1 = Significant Negative Influence

	Regions											Nat'l 2002	Nat'l 2001	Nat'l 2000
	1 n=16	2 n=29	3 n=16	4 n=76	5 n=45	6 n=97	7 n=97	8 n=81	9 n=31	10 n=1	11 n=1			
Finances														
Federal Funding (Supply)	3.06	3.00	3.06	2.81	3.36	3.26	3.11	3.09	3.11	3.00	4.00	3.11	3.19	3.25
State Funding (Supply)	2.44	2.89	2.50	2.48	2.87	2.95	2.77	2.96	3.00	4.00	4.00	2.81	3.05	3.23
Local Funding (Supply)	2.69	2.85	2.69	2.61	3.08	2.89	2.89	2.99	3.04	3.00	4.00	2.88	3.06	3.12
Federal Funding (Demand)	2.71	2.75	3.29	2.63	3.14	3.23	2.92	3.18	3.12	3.00	4.00	3.01		
State Funding (Demand)	2.53	2.52	2.64	2.12	3.03	2.97	2.59	2.85	2.73	4.00	4.00	2.69		
Local Funding (Demand)	2.60	2.29	2.79	2.25	3.06	2.83	2.74	2.89	2.71	3.00	4.00	2.71		
Retirement														
Postponed Retirement (Demand)	2.87	2.92	3.00	2.92	3.25	3.11	2.96	2.96	2.96	4.00		3.00	3.08	3.00
Routine Retirement (Demand)	3.27	3.00	3.43	3.44	3.00	3.18	3.33	3.65	3.62	3.00		3.34	3.57	3.61
Early Retirement (Demand)	3.47	3.08	3.47	3.43	2.86	3.25	3.97	3.78	4.00	3.00		3.44	3.68	3.72
Hiring of Retirees (Supply)	3.00	2.87	2.94	3.16	3.30	3.19	3.12	3.10	3.17	3.00	2.00	3.13		
Legislative Mandates														
State Mandates (Supply)	2.50	2.63	2.29	2.47	2.53	3.00	2.59	2.87	2.89	3.00	3.00	2.71	3.05	3.22
Federal Mandates (Supply)	2.80	2.54	2.86	2.55	2.90	3.07	2.83	2.99	2.89	3.00	4.00	2.86	3.06	3.18
State Mandates (Demand)	2.73	2.82	2.55	2.54	2.91	3.14	2.77	2.99	3.22	4.00	3.00	2.88		
Federal Mandates (Demand)	2.93	2.82	3.00	2.71	2.97	3.18	2.89	3.12	3.21	4.00	4.00	2.99		
Demographic Shifts in Population														
Limited English Proficient Students (Demand)	3.47	3.07	3.40	3.09	3.03	3.33	3.31	3.42	3.07	3.00	3.00	3.25	3.23	3.20
Rural/Suburban/Urban Shifts-Teachers (Demand)	3.13	2.85	3.33	2.96	2.95	3.16	3.02	3.03	2.96	3.00	3.00	3.03	3.06	3.01
Rural/Suburban/Urban Shifts-Students (Demand)	3.20	2.81	3.13	2.93	2.89	3.18	3.13	3.25	3.07	3.00	3.00	3.09	3.12	3.08
Student Enrollment (Demand)	3.13	3.04	2.67	2.93	2.92	3.33	3.22	3.38	3.44	4.00	2.00	3.17	3.37	3.32
Private Schools/Home Schooling (Demand)	2.73	2.96	2.80	2.78	3.03	2.80	2.91	3.03	2.96	4.00	3.00	2.90	2.90	2.88
Class Size (Demand)	2.80	3.22	3.00	2.69	2.97	3.07	3.08	3.21	3.11	3.00	2.00	3.02	3.24	3.33
Military Demobilization													2.97	3.01
Teaching Environment														
Teacher Salaries (Supply)	2.50	2.66	2.13	2.62	2.49	2.66	2.65	3.36	2.59	3.00	4.00	2.67	2.81	2.75
Teacher Benefits (Supply)	2.80	2.79	2.63	2.64	2.44	2.91	3.05	3.46	3.10	3.00	4.00	2.94	3.01	2.93
School Violence (Supply)	2.60	2.31	2.06	2.44	2.14	2.28	2.30	2.42	2.20	2.00	3.00	2.32	2.30	2.30
Working Conditions (Supply)	2.94	2.45	2.38	2.54	2.39	2.33	2.54	2.54	2.65	3.00	3.00	2.49	2.51	2.50
Teacher Education At My Organization														
Mobility of New Graduates (Supply)	2.50	2.79	3.13	2.80	3.25	3.02	2.77	2.90	2.77	3.00		2.89	3.01	2.98
Mobility of Experienced Teachers (Supply)	2.63	2.68	3.31	2.70	2.98	2.95	2.58	2.73	3.14	3.00		2.80	2.91	2.89
Changing Teacher Education Enrollments													2.98	3.02
Increasing Teacher Ed. Enrollments (Supply)	3.23	3.54	3.69	3.36	3.66	3.78	3.38	3.67	4.00	4.00	2.00	3.58		
Decreasing Teacher Ed. Enrollments (Supply)	2.50	2.60	2.17	2.36	2.68	2.88	3.00	2.75	2.70			2.73		
Demographic Changes in Applicant Pool														
Alternative Certification/Licensure (Supply)	3.14	3.25	3.25	3.31	3.31	3.67	3.31	3.25	3.53	3.00	3.00	3.38		
Foreign-prepared Teachers (Supply)	3.07	2.96	2.94	3.04	3.05	3.02	3.01	2.89	2.97	3.00	4.00	3.00		
Distance Learning Teacher Education (Supply)	3.07	3.07	3.06	3.32	3.28	3.24	3.11	3.12	3.10	4.00	4.00	3.19		
Economic Conditions (Supply)	2.80	2.96	2.31	2.70	2.86	3.23	2.77	3.05	2.67	2.00	4.00	2.90		
Personal Career Shifts (Supply)	3.40	3.37	3.31	3.24	3.29	3.49	3.30	3.48	3.62	3.00	2.00	3.38		

Quality Versus Quantity Issues

As mentioned with licensure issues, there are implications for examining the quantity needs of schools without compromising quality. Alternative pathways to teaching can supply the quantity of teachers needed, but we must be certain that alternatively trained educators are held to the same expectations of performance and accountability.

Recruitment of Diverse Educators

AAEE research shows that a majority of institutions does not expect an increase in the numbers of minority educators coming through their teacher preparation programs. Yet, we know that the retirements of minority educators will outpace the preparation of new minority educators to take their places. Minority recruitment programs have existed for decades and yet do not seem to be showing positive outcomes in the numbers

of new teachers. How can we effect real changes in these patterns? Further research must examine different pathways that would enhance the recruitment of minority educators: community college recruitment, “grow your own” programs with teacher aides and other school employees, high school programs to encourage minority students to enter the profession of education, scholarships, loan forgiveness programs, and grants to support minority enrollment.

Retention

Supply and demand research also requires looking at how long an educator remains in the field and why educators leave. All the programs for recruitment are for naught if we do not focus on retention of educators as well. Who leaves the profession? If they leave, did they come from traditional programs or alternative? Are they leaving because of salary, working conditions, environment, lack of professional preparation, change of commitment, or lack of administrative support? Are they leaving due to the pressures of outside influences (state mandates, accountability issues, etc.)?

Future research on supply and demand must focus on not only generating highly qualified educators, but also on ways to sustain them and support them in satisfying careers as classroom teachers, administrators, counselors, and other education professionals.

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Appendix A

Intraclass Correlations for Longitudinal Studies of Supply and Demand

		AAEE 2002	AAEE 2001	AAEE 2000	AAEE 1999	AAEE 1998	AAEE 1997	AAEE 1996	AAEE 1995	SEASCUS 1994	MAASCUS 1995	GLASCUS 1997
AAEE 2002	Pearson Correlation Sig. (2-tailed)	1 0.000	0.930 0.000	0.965 0.000	0.964 0.000	0.954 0.000	0.951 0.000	0.934 0.000	0.912 0.000	0.803 0.000	0.676 0.000	0.707
AAEE 2001	Pearson Correlation Sig. (2-tailed)	0.930 0.000	1 0.000	0.951 0.000	0.927 0.000	0.897 0.000	0.88 0.000	0.853 0.000	0.833 0.000	0.679 0.000	0.573 0.000	0.601
AAEE 2000	Pearson Correlation Sig. (2-tailed)	0.965 0.000	0.951 0.000	1 0.000	0.986 0.000	0.961 0.000	0.95 0.000	0.930 0.000	0.91 0.000	0.782 0.000	0.66 0.000	0.696
AAEE 1999	Pearson Correlation Sig. (2-tailed)	0.964 0.000	0.927 0.000	0.986 0.000	1 0.000	0.977 0.000	0.968 0.000	0.954 0.000	0.933 0.000	0.809 0.000	0.713 0.000	0.741
AAEE 1998	Pearson Correlation Sig. (2-tailed)	0.954 0.000	0.897 0.000	0.961 0.000	0.977 0.000	1 0.000	0.992 0.000	0.984 0.000	0.968 0.000	0.869 0.000	0.775 0.000	0.802
AAEE 1997	Pearson Correlation Sig. (2-tailed)	0.951 0.000	0.88 0.000	0.95 0.000	0.968 0.000	0.992 0.000	1 0.000	0.993 0.000	0.983 0.000	0.892 0.000	0.804 0.000	0.826
AAEE 1996	Pearson Correlation Sig. (2-tailed)	0.934 0.000	0.853 0.000	0.930 0.000	0.954 0.000	0.984 0.000	0.993 0.000	1 0.000	0.991 0.000	0.914 0.000	0.824 0.000	0.849
ASCUS 1995	Pearson Correlation Sig. (2-tailed)	0.912 0.000	0.833 0.000	0.91 0.000	0.933 0.000	0.968 0.000	0.983 0.000	0.991 0.000	1 0.000	0.919 0.000	0.824 0.000	0.851
SEASCUS 1994	Pearson Correlation Sig. (2-tailed)	0.803 0.000	0.679 0.000	0.782 0.000	0.809 0.000	0.869 0.000	0.892 0.000	0.914 0.000	0.919 0.000	1 0.000	0.906 0.000	0.935
MAASCUS 1995	Pearson Correlation Sig. (2-tailed)	0.676 0.000	0.573 0.000	0.66 0.000	0.713 0.000	0.775 0.000	0.804 0.000	0.824 0.000	0.824 0.000	0.906 0.000	1 0.000	0.978
GLASCUS 1997	Pearson Correlation Sig. (2-tailed)	0.707 0.000	0.601 0.000	0.696 0.000	0.741 0.000	0.802 0.000	0.826 0.000	0.849 0.000	0.851 0.000	0.935 0.000	0.978 0.000	1

SEASCUS, MAASCUS, and GLASCUS studies were correlation studies conducted with School District HR officials. All other studies were conducted with colleges of education.

Appendix B

Regional Relative Demand By Teaching Area

Region 1

Idaho, Oregon, Washington

Considerable Shortage = 5.00 - 4.21		Languages - Classics	2.75
Spec. Ed. - Learning Disability	4.33	Languages - German	2.75
Spec. Ed. - Severe/Profound Dis.	4.33	Languages - French	2.73
Some Shortage = 4.20 - 3.41		Music - Vocal	2.67
Spec. Ed. - Mental Retardation	4.20	Audiologist	2.67
Spec. Ed. - Multicategorical	4.17	Art/Visual Education	2.62
Science - Physics	4.14	Health Education	2.62
Spec. Ed. - Dual Cert. (Gen./Spec.)	4.14	Some Surplus = 2.60 - 1.81	
Science - Chemistry	4.07	Physical Education	2.54
Computer Science Education	4.00	Elementary - Primary	2.53
Driver Education Traffic Safety	4.00	Elementary - Kindergarten	2.50
Spec. Ed. - Emotional/Beh. Dis.	4.00	Superintendent	2.33
Spec. Ed. - Visually Impaired	4.00	Gifted/Talented Education	2.33
Mathematics Education	3.88	Dance Education	2.25
Science - Biology	3.86	Agriculture	
Science - Earth/Physical	3.83	Considerable Surplus = 1.80 - 1.00	
Technology Education	3.83	None	
Languages - Spanish	3.71		
Science - General	3.71		
Spec. Ed. - Mild/Moderate Disabilities	3.67		
Speech Pathologist	3.67		
Bilingual Education	3.63		
Principal - Middle School	3.63		
Spec. Ed. - Hearing Impaired	3.60		
Spec. Ed. - Early Childhood Spec. Ed.	3.57		
Principal - High School	3.56		
Principal - Elementary	3.44		
Balanced Supply and Demand = 3.40 - 2.61			
School Psychologist	3.40		
Reading	3.33		
Business Manager	3.33		
School Nurse	3.33		
English as a Second Language	3.27		
Curriculum Director	3.25		
Library Science/Media Tech.	3.25		
Business Education	3.20		
Elementary - Middle School	3.20		
Counselor	3.20		
Languages - Japanese	3.14		
Speech Education	3.14		
English/Language Arts	3.00		
Home Ec/Consumer Science	3.00		
Music - Instrumental	3.00		
Music - General	3.00		
Human Resources Director	3.00		
Occupational Therapist	3.00		
Physical Therapist	3.00		
School Social Worker	3.00		
Social Studies Education	2.93		
Theatre/Drama	2.83		
Elementary Pre-K	2.82		
Elementary - Intermediate	2.75		
Journalism Education	2.75		

Data Trends

- ❖ The special education fields of learning disability and severe/profound disability are reported as in “considerable shortage.”
- ❖ Twenty-three fields are reported as in “some shortage”; thirty-two fields are reported as “balanced.”
- ❖ Physical education, kindergarten, primary, gifted/talented, dance, agriculture, and superintendent are reported as in “some surplus.”

Observations and Comments

- ❖ State funding shortages caused conservative hiring for 2002-2003 in Washington, Idaho, and Oregon.
- ❖ 9/11 affected the supply of teachers. Many are looking at teaching due to the poor economy and a desire for stability.

Regional Relative Demand By Teaching Area

Region 2

Arizona, California, Nevada, Utah

Considerable Shortage = 5.00 - 4.21		Occupational Therapist	3.00
Spec. Ed. - Severe/Profound Dis.	4.70	Business Education	2.90
Spec. Ed. - Mental Retardation	4.67	Home Ec/Consumer Science	2.90
Audiologist	4.50	Languages - French	2.83
Spec. Ed. - Hearing Impaired	4.43	Theatre/Drama	2.80
Spec. Ed. - Learning Disability	4.33	School Social Worker	2.78
Spec. Ed. - Visually Impaired	4.33	Health Education	2.77
Spec. Ed. - Emotional/Beh. Dis.	4.30	ocial Studies Education	2.71
Science - Chemistry	4.28	Physical Education	2.68
Speech Pathologist	4.27	Art/Visual Education	2.67
Spec. Ed. - Mild/Moderate Disabilities	4.25		
Mathematics Education	4.22	Some Surplus = 2.60 - 1.81	
Bilingual Education	4.21	Journalism Education	2.50
Science - Earth/Physical	4.21	Dance Education	2.25
Some Shortage = 4.20 - 3.41		Considerable Surplus = 1.80 - 1.00	
Science - Physics	4.16	None	
Technology Education	4.14		
Science - General	4.05		
Driver Education Traffic Safety	4.00		
Spec. Ed. - Multicategorical	4.00		
Spec. Ed. - Early Childhood Spec. Ed.	3.89		
Spec. Ed. - Dual Cert. (Gen./Spec.)	3.89		
Science - Biology	3.85		
Elementary - Middle School	3.76		
Principal - High School	3.65		
English as a Second Language	3.61		
Principal - Middle School	3.60		
Superintendent	3.56		
Languages - Spanish	3.55		
Principal - Elementary	3.55		
School Nurse	3.55		
Agriculture	3.50		
Reading	3.50		
Physical Therapist	3.50		
School Psychologist	3.50		
Elementary - Primary	3.46		
Elementary - Intermediate	3.43		
Balanced Supply and Demand = 3.40 - 2.61			
Music - Instrumental	3.40		
English/Language Arts	3.38		
Elementary Pre-K	3.36		
Elementary - Kindergarten	3.33		
Languages - Classics	3.33		
Languages - Japanese	3.33		
Counselor	3.25		
Gifted/Talented Education	3.25		
Speech Education	3.20		
Languages - German	3.06		
Computer Science Education	3.00		
Music - Vocal	3.00		
Music - General	3.00		
Business Manager	3.00		
Curriculum Director	3.00		
Human Resources Director	3.00		
Library Science/Media Tech.	3.00		

Data Trends

- ❖ Seven special education fields, mathematics, earth/physical science, chemistry, bilingual education, and speech pathologist are reported as in “considerable shortage.”
- ❖ “Some surplus” is reported for journalism and dance education.

Observations and Comments

- ❖ California faces a dual challenge. The poor economy means less money for school districts, teacher layoffs, and less hiring. At the same time, the state legislature is dramatically changing teacher preparation and certification.
- ❖ The dot.com meltdown has brought math/science professionals to teaching. Stock market declines have caused many teachers to defer intended retirements, thus reducing opportunities for new teacher candidates.

Regional Relative Demand By Teaching Area

Region 3

Colorado, Montana, New Mexico, Wyoming

Considerable Shortage = 5.00 - 4.21		English/Language Arts	3.27
Bilingual Education	4.86	School Social Worker	3.25
Spec. Ed. - Mild/Moderate Disabilities	4.83	Business Education	3.13
Spec. Ed. - Mental Retardation	4.67	Languages - French	3.11
Spec. Ed. - Severe/Profound Dis.	4.67	Journalism Education	3.00
Spec. Ed. - Emotional/Beh. Dis.	4.60	Languages - German	3.00
Mathematics Education	4.54	Speech Education	3.00
Agriculture	4.50	Business Manager	3.00
Spec. Ed. - Hearing Impaired	4.50	Social Studies Education	2.85
Speech Pathologist	4.50		
Spec. Ed. - Multicategorical	4.40	Some Surplus = 2.60 - 1.81	
English as a Second Language	4.33	Dance Education	2.50
Spec. Ed. - Visually Impaired	4.33	Physical Education	2.45
Physical Therapist	4.33		
Spec. Ed. - Early Childhood Spec. Ed.	4.29	Considerable Surplus = 1.80 - 1.00	
Languages - Spanish	4.25	None	
Spec. Ed. - Learning Disability	4.25		
		No data	
Some Shortage = 4.20 - 3.41		Driver Education Traffic Safety	
School Psychologist	4.17		
Home Ec/Consumer Science	4.00		
Music - Instrumental	4.00		
Music - Vocal	4.00		
Music - General	4.00		
Science - Biology	4.00		
Science - Chemistry	4.00		
Science - General	4.00		
Technology Education	4.00		
Superintendent	4.00		
Audiologist	4.00		
Gifted/Talented Education	4.00		
Occupational Therapist	4.00		
Science - Earth/Physical	3.90		
Science - Physics	3.80		
Spec. Ed. - Dual Cert. (Gen./Spec.)	3.80		
Languages - Classics	3.67		
Curriculum Director	3.67		
Human Resources Director	3.67		
Counselor	3.67		
School Nurse	3.67		
Principal - Elementary	3.63		
Principal - Middle School	3.63		
Elementary - Primary	3.54		
Computer Science Education	3.50		
Principal - High School	3.50		
Library Science/Media Tech.	3.50		
Elementary - Intermediate	3.45		
Elementary Pre-K	3.44		
Health Education	3.43		
Reading	3.43		
Elementary - Kindergarten	3.42		
Balanced Supply and Demand = 3.40 - 2.61			
Elementary - Middle School	3.40		
Art/Visual Education	3.38		
Languages - Japanese	3.33		
Theatre/Drama	3.29		

Data Trends

- ❖ All special education fields except dual certification, as well as bilingual education, mathematics, agriculture, speech pathologist, English as a second language, physical therapist, and Spanish are reported as in “considerable shortage.”
- ❖ Thirty-two fields are reported as in “some shortage.”
- ❖ Dance and physical education are reported as in “some surplus.”

Observations and Comments

- ❖ The cost of living and low salaries for teachers in Montana have encouraged new graduates and experienced teachers to seek jobs outside the state.

Regional Relative Demand By Teaching Area

Region 4

Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota

Considerable Shortage = 5.00 - 4.21		Elementary - Middle School	3.12
Spec. Ed. - Emotional/Beh. Dis.	4.68	Art/Visual Education	3.10
Spec. Ed. - Hearing Impaired	4.54	Curriculum Director	3.06
Spec. Ed. - Severe/Profound Dis.	4.53	Theatre/Drama	2.97
Spec. Ed. - Visually Impaired	4.45	Elementary Pre-K	2.86
Spec. Ed. - Mental Retardation	4.44	Dance Education	2.80
Spec. Ed. - Mild/Moderate Disabilities	4.41	Elementary - Kindergarten	2.71
Mathematics Education	4.34	Elementary - Intermediate	2.69
Spec. Ed. - Learning Disability	4.34	Social Studies Education	2.69
Science - Physics	4.33	Elementary - Primary	2.60
Science - Chemistry	4.30		
Spec. Ed. - Multicategorical	4.28	Some Surplus = 2.60 - 1.81	
Superintendent	4.25	Physical Education	2.48
		Health Education	2.44
Some Shortage = 4.20 - 3.41		Considerable Surplus = 1.80 - 1.00	
Audiologist	4.14	None	
Science - Biology	4.00		
Science - Earth/Physical	4.00		
Spec. Ed. - Early Childhood Spec. Ed.	3.97		
Computer Science Education	3.96		
Spec. Ed. - Dual Cert. (Gen./Spec.)	3.96		
Technology Education	3.96		
Principal - High School	3.94		
Library Science/Media Tech.	3.93		
Bilingual Education	3.92		
Languages - Spanish	3.91		
English as a Second Language	3.89		
Speech Pathologist	3.87		
Music - Instrumental	3.85		
Music - Vocal	3.81		
Science - General	3.80		
Home Ec/Consumer Science	3.78		
Physical Therapist	3.78		
Music - General	3.76		
Principal - Elementary	3.74		
Principal - Middle School	3.74		
Counselor	3.70		
School Psychologist	3.69		
School Nurse	3.59		
School Social Worker	3.53		
Agriculture	3.50		
Occupational Therapist	3.50		
Languages - French	3.47		
Languages - Classics	3.42		
Gifted/Talented Education	3.42		
Balanced Supply and Demand = 3.40 - 2.61			
Business Education	3.39		
Languages - German	3.37		
Reading	3.34		
Business Manager	3.30		
Journalism Education	3.28		
Driver Education Traffic Safety	3.25		
English/Language Arts	3.25		
Human Resources Director	3.25		
Speech Education	3.21		
Languages - Japanese	3.20		

Data Trends

- ❖ All fields of special education except early childhood and dual certification, mathematics, physics, chemistry, and superintendent are reported as in “considerable shortage.”
- ❖ Thirty fields are reported as in “some shortage.”
- ❖ Areas reported in “some surplus” include physical education and health education.

Observations and Comments

- ❖ Respondents from Minnesota, Nebraska, Iowa, and Kansas report negative impacts on teacher hiring due to cuts in state funding.
- ❖ Failure of local tax referenda has led to teacher layoffs in many districts.
- ❖ North Dakota teachers are among the lowest paid in the country.

Regional Relative Demand By Teaching Area

Region 5

Arkansas, Louisiana, Oklahoma, Texas

Considerable Shortage = 5.00 - 4.21		Journalism Education	3.00
Mathematics Education	4.55	Languages - Classics	3.00
English as a Second Language	4.39	Human Resources Director	3.00
Bilingual Education	4.38	Social Studies Education	2.97
Spec. Ed. - Emotional/Beh. Dis.	4.30	Theatre/Drama	2.95
Science - Physics	4.24	Art/Visual Education	2.86
Spec. Ed. - Mild/Moderate Disabilities	4.21	Business Education	2.85
		Driver Education Traffic Safety	2.75
		Health Education	2.68
		Agriculture	2.67
Some Shortage = 4.20 - 3.41		Some Surplus = 2.60 - 1.81	
Science - Chemistry	4.18	Physical Education	2.57
Spec. Ed. - Multicategorical	4.14	Dance Education	2.50
Technology Education	4.12		
Languages - Spanish	4.04	Considerable Surplus = 1.80 - 1.00	
Science - General	4.04	None	
Elementary - Middle School	4.03		
Spec. Ed. - Hearing Impaired	4.00		
Spec. Ed. - Mental Retardation	4.00		
Spec. Ed. - Visually Impaired	4.00		
Spec. Ed. - Severe/Profound Dis.	4.00		
Science - Biology	3.97		
Science - Earth/Physical	3.93		
Spec. Ed. - Learning Disability	3.78		
Physical Therapist	3.67		
Spec. Ed. - Early Childhood Spec. Ed.	3.64		
Computer Science Education	3.63		
Languages - Japanese	3.60		
Reading	3.59		
Elementary - Intermediate	3.53		
Spec. Ed. - Dual Cert. (Gen./Spec.)	3.50		
Business Manager	3.50		
Audiologist	3.50		
Occupational Therapist	3.50		
Speech Pathologist	3.50		
Gifted/Talented Education	3.46		
Counselor	3.42		
Balanced Supply and Demand = 3.40 - 2.61			
School Social Worker	3.40		
Elementary Pre-K	3.38		
Principal - High School	3.38		
Elementary - Primary	3.36		
Elementary - Kindergarten	3.33		
Principal - Middle School	3.33		
School Nurse	3.33		
Principal - Elementary	3.31		
Languages - French	3.25		
Library Science/Media Tech.	3.25		
Superintendent	3.22		
Languages - German	3.20		
Curriculum Director	3.18		
English/Language Arts	3.15		
School Psychologist	3.13		
Music - Vocal	3.11		
Home Ec/Consumer Science	3.10		
Music - General	3.08		
Music - Instrumental	3.07		
Speech Education	3.06		

Data Trends

- ❖ The special education fields of emotional/behavioral disorders and mild/moderate disabilities are reported as in “considerable shortage,” as are mathematics, bilingual education, and physics.
- ❖ Twenty-six fields are reported as in “some shortage.”
- ❖ Physical education and dance are reported as in “some surplus.”

Observations and Comments

- ❖ The problem in Texas is not a significant teacher shortage; the problem is retention. More than a quarter million educators are not using their certificates.
- ❖ Aggressive recruiting efforts by districts in urban areas and alternative certification programs have had good success in Texas. This creates problems for states such as Arkansas that do not fund teacher salaries at competitive levels.

Regional Relative Demand By Teaching Area

Region 6

Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia

Considerable Shortage = 5.00 - 4.21		Music - Instrumental	3.05
Spec. Ed. - Visually Impaired	4.67	Music - Vocal	3.03
Spec. Ed. - Severe/Profound Dis.	4.54	Journalism Education	3.00
Spec. Ed. - Learning Disability	4.49	Occupational Therapist	3.00
Spec. Ed. - Emotional/Beh. Dis.	4.48	Music - General	2.91
Spec. Ed. - Multicategorical	4.40	Art/Visual Education	2.82
Spec. Ed. - Hearing Impaired	4.38	Physical Education	2.69
Mathematics Education	4.35	Social Studies Education	2.68
English as a Second Language	4.31	Health Education	2.63
Spec. Ed. - Mild/Moderate Disabilities	4.30		
Spec. Ed. - Mental Retardation	4.25	Some Surplus = 2.60 - 1.81	
Science - Physics	4.23	Theatre/Drama	2.56
		Driver Education Traffic Safety	2.43
		Dance Education	2.33
Some Shortage = 4.20 - 3.41			
Spec. Ed. - Dual Cert. (Gen./Spec.)	4.17	Considerable Surplus = 1.80 - 1.00	
Bilingual Education	4.09	None	
Science - Chemistry	4.09		
Languages - Spanish	4.07		
Technology Education	3.94		
Spec. Ed. - Early Childhood Spec. Ed.	3.93		
Science - Earth/Physical	3.91		
Science - Biology	3.90		
Science - General	3.75		
Elementary - Middle School	3.71		
Speech Pathologist	3.69		
Computer Science Education	3.62		
Principal - Middle School	3.62		
Principal - High School	3.62		
Library Science/Media Tech.	3.59		
Principal - Elementary	3.52		
Elementary - Intermediate	3.51		
Business Manager	3.50		
Gifted/Talented Education	3.50		
Languages - French	3.44		
Audiologist	3.44		
Reading	3.43		
Balanced Supply and Demand = 3.40 - 2.61			
Languages - German	3.37		
School Psychologist	3.37		
Elementary - Primary	3.34		
English/Language Arts	3.33		
Languages - Classics	3.33		
Elementary Pre-K	3.30		
Languages - Japanese	3.29		
Elementary - Kindergarten	3.26		
School Social Worker	3.26		
Agriculture	3.25		
Human Resources Director	3.25		
Physical Therapist	3.20		
Superintendent	3.19		
School Nurse	3.18		
Counselor	3.16		
Home Ec/Consumer Science	3.14		
Speech Education	3.13		
Curriculum Director	3.12		
Business Education	3.07		

Data Trends

- ❖ All special education fields except dual certification and early childhood, as well as mathematics, physics, and English as a second language are reported as in “considerable shortage.”
- ❖ Theater/drama, driver education, and dance education are reported as in “some surplus.”

Observations and Comments

- ❖ Georgia’s four-week alternative certification program put more than 700 teachers in classrooms last fall.
- ❖ A number of our students were hired without completing student teaching due to demand in their specialties (ESL and LD in particular).
- ❖ High-stakes testing of students negatively impacts the number of teacher candidates, but positively impacts the number of positions available as teachers transfer out of tested grade levels.
- ❖ Our region continues to lose student enrollment due to poor economic conditions. Graduates must either leave the area or spend several years on the substitute list waiting for full-time openings.

Regional Relative Demand By Teaching Area

Region 7

Illinois, Indiana, Michigan, Ohio, Wisconsin

Considerable Shortage = 5.00 - 4.21		English/Language Arts	2.98
Spec. Ed. - Emotional/Beh. Dis.	4.26	Journalism Education	2.93
Spec. Ed. - Severe/Profound Dis.	4.21	Art/Visual Education	2.92
Some Shortage = 4.20 - 3.41		Theatre/Drama	2.91
Science - Physics	4.18	Elementary - Intermediate	2.81
Science - Chemistry	4.17	Dance Education	2.80
Mathematics Education	4.12	Elementary Pre-K	2.63
Spec. Ed. - Mental Retardation	4.11	Elementary - Kindergarten	2.61
Spec. Ed. - Mild/Moderate Disabilities	4.11	Some Surplus = 2.60 - 1.81	
Bilingual Education	4.05	Health Education	2.59
Speech Pathologist	4.05	Elementary - Primary	2.58
Spec. Ed. - Hearing Impaired	4.00	Physical Education	2.42
Languages - Spanish	3.97	Social Studies Education	2.30
Spec. Ed. - Multicategorical	3.96	Considerable Surplus = 1.80 - 1.00	
Audiologist	3.92	None	
Technology Education	3.88		
Languages - Japanese	3.86		
Spec. Ed. - Learning Disability	3.85		
Spec. Ed. - Dual Cert. (Gen./Spec.)	3.85		
Principal - High School	3.85		
Science - Biology	3.83		
Superintendent	3.83		
Science - Earth/Physical	3.80		
Spec. Ed. - Visually Impaired	3.80		
Principal - Middle School	3.77		
Library Science/Media Tech.	3.71		
School Psychologist	3.71		
Agriculture	3.67		
Languages - Classics	3.67		
Principal - Elementary	3.66		
Home Ec/Consumer Science	3.65		
Physical Therapist	3.64		
Science - General	3.61		
Spec. Ed. - Early Childhood Spec. Ed.	3.61		
English as a Second Language	3.59		
Languages - French	3.54		
School Social Worker	3.54		
Computer Science Education	3.52		
Counselor	3.52		
Business Manager	3.50		
Balanced Supply and Demand = 3.40 - 2.61			
Occupational Therapist	3.38		
Human Resources Director	3.36		
Languages - German	3.35		
School Nurse	3.33		
Curriculum Director	3.27		
Reading	3.26		
Gifted/Talented Education	3.25		
Speech Education	3.23		
Elementary - Middle School	3.18		
Music - General	3.17		
Music - Instrumental	3.15		
Music - Vocal	3.07		
Business Education	3.04		
Driver Education Traffic Safety	3.00		

Data Trends

- ❖ Only the special education fields of emotional/behavioral disorders and severe/profound disability are reported as in “considerable shortage.”
- ❖ Thirty-six fields are reported as in “some shortage.”
- ❖ Health education, primary, physical education, and social studies are reported as in “some surplus.”

Observations and Comments

- ❖ Respondents from Illinois, Indiana, Michigan, Ohio, and Wisconsin reported the negative impacts of state funding.
- ❖ Entry-level teachers are reluctant to relocate far from home due to financial obligations and relocation costs.
- ❖ New licensure standards in Ohio have contributed to a surplus of early childhood teachers and a shortage of middle school teachers.

Regional Relative Demand By Teaching Area

Region 8

Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania

<p>Considerable Shortage = 5.00 - 4.21</p> <p>Science - Physics 4.33</p> <p>Technology Education 4.31</p> <p>Some Shortage = 4.20 - 3.41</p> <p>Mathematics Education 4.18</p> <p>Science - Chemistry 4.14</p> <p>Languages - Spanish 4.09</p> <p>Science - Earth/Physical 4.02</p> <p>Spec. Ed. - Multicategorical 3.98</p> <p>Speech Pathologist 3.89</p> <p>Spec. Ed. - Emotional/Beh. Dis. 3.88</p> <p>Spec. Ed. - Dual Cert. (Gen./Spec.) 3.86</p> <p>Library Science/Media Tech. 3.83</p> <p>Spec. Ed. - Learning Disability 3.82</p> <p>Home Ec/Consumer Science 3.80</p> <p>Superintendent 3.78</p> <p>Audiologist 3.75</p> <p>Science - Biology 3.73</p> <p>Bilingual Education 3.71</p> <p>Science - General 3.71</p> <p>Speech Education 3.67</p> <p>Spec. Ed. - Early Childhood Spec. Ed. 3.65</p> <p>English as a Second Language 3.64</p> <p>Principal - High School 3.63</p> <p>Spec. Ed. - Mild/Moderate Disabilities 3.60</p> <p>Spec. Ed. - Severe/Profound Dis. 3.56</p> <p>School Psychologist 3.55</p> <p>Principal - Elementary 3.53</p> <p>Spec. Ed. - Hearing Impaired 3.50</p> <p>Spec. Ed. - Visually Impaired 3.50</p> <p>Principal - Middle School 3.50</p> <p>Business Manager 3.50</p> <p>Reading 3.43</p> <p>Spec. Ed. - Mental Retardation 3.43</p> <p>Balanced Supply and Demand = 3.40 - 2.61</p> <p>School Nurse 3.36</p> <p>Agriculture 3.25</p> <p>Computer Science Education 3.25</p> <p>Music - General 3.25</p> <p>Music - Vocal 3.17</p> <p>Languages - French 3.15</p> <p>Curriculum Director 3.15</p> <p>Counselor 3.13</p> <p>Languages - Classics 3.10</p> <p>Music - Instrumental 3.07</p> <p>Driver Education Traffic Safety 3.00</p> <p>Elementary - Middle School 3.00</p> <p>Journalism Education 3.00</p> <p>Languages - Japanese 3.00</p> <p>Human Resources Director 3.00</p> <p>Physical Therapist 3.00</p> <p>Languages - German 2.96</p> <p>Occupational Therapist 2.90</p> <p>Gifted/Talented Education 2.83</p> <p>Elementary - Intermediate 2.79</p>		<p>English/Language Arts 2.73</p> <p>Business Education 2.67</p> <p>Elementary - Primary 2.63</p> <p>School Social Worker 2.62</p> <p>Some Surplus = 2.60 - 1.81</p> <p>Elementary Pre-K 2.57</p> <p>Art/Visual Education 2.55</p> <p>Theatre/Drama 2.50</p> <p>Elementary - Kindergarten 2.46</p> <p>Physical Education 2.42</p> <p>Social Studies Education 2.39</p> <p>Health Education 2.38</p> <p>Dance Education 2.00</p> <p>Considerable Surplus = 1.80 - 1.00</p> <p>None</p>
Data Trends		
<ul style="list-style-type: none"> ❖ Only the fields of physics and technology education are reported as in “considerable shortage.” Thirty fields are reported as in “some shortage.” ❖ Pre-kindergarten, art/visual, theatre/drama, kindergarten, physical education, social studies, health education, and dance are reported as in “some surplus.” 		
Observations and Comments		
<ul style="list-style-type: none"> ❖ Respondents from New York and New Jersey report negative impacts of state funding. ❖ New Pennsylvania certification standards will have an impact in the next two years. ❖ Salaries are excellent for teachers in Pennsylvania. 		

Regional Relative Demand By Teaching Area

Region 9

Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont

<p>Considerable Shortage = 5.00 - 4.21</p> <p>Occupational Therapist 5.00</p> <p>Spec. Ed. - Mental Retardation 4.86</p> <p>Spec. Ed. - Emotional/Beh. Dis. 4.78</p> <p>Science - Physics 4.67</p> <p>Spec. Ed. - Hearing Impaired 4.67</p> <p>Science - Chemistry 4.65</p> <p>Spec. Ed. - Severe/Profound Dis. 4.63</p> <p>Spec. Ed. - Learning Disability 4.60</p> <p>Mathematics Education 4.55</p> <p>Spec. Ed. - Multicategorical 4.55</p> <p>Spec. Ed. - Visually Impaired 4.50</p> <p>Spec. Ed. - Mild/Moderate Disabilities 4.40</p> <p>Principal - Middle School 4.40</p> <p>Principal - High School 4.36</p> <p>Bilingual Education 4.25</p> <p>Computer Science Education 4.25</p> <p>Science - General 4.22</p> <p>Some Shortage = 4.20 - 3.41</p> <p>Principal - Elementary 4.18</p> <p>Science - Biology 4.13</p> <p>Science - Earth/Physical 4.11</p> <p>English as a Second Language 4.00</p> <p>Home Ec/Consumer Science 4.00</p> <p>Spec. Ed. - Dual Cert. (Gen./Spec.) 4.00</p> <p>Technology Education 4.00</p> <p>Superintendent 4.00</p> <p>Audiologist 4.00</p> <p>Physical Therapist 4.00</p> <p>Speech Pathologist 4.00</p> <p>Spec. Ed. - Early Childhood Spec. Ed. 3.92</p> <p>Languages - Spanish 3.82</p> <p>School Nurse 3.71</p> <p>Balanced Supply and Demand = 3.40 - 2.61</p> <p>Languages - German 3.40</p> <p>Languages - French 3.38</p> <p>Languages - Japanese 3.33</p> <p>School Social Worker 3.33</p> <p>Curriculum Director 3.25</p> <p>Counselor 3.21</p> <p>Social Studies Education 3.17</p> <p>Music - General 3.15</p> <p>Health Education 3.13</p> <p>Reading 3.06</p> <p>Business Education 3.00</p> <p>Languages - Classics 3.00</p> <p>Music - Instrumental 3.00</p> <p>Music - Vocal 3.00</p> <p>Business Manager 3.00</p> <p>Human Resources Director 3.00</p> <p>Gifted/Talented Education 3.00</p> <p>School Psychologist 3.00</p> <p>Elementary - Middle School 2.91</p> <p>Elementary Pre-K 2.90</p> <p>Physical Education 2.90</p>	<p>English/Language Arts 2.85</p> <p>Art/Visual Education 2.79</p> <p>Dance Education 2.75</p> <p>Theatre/Drama 2.67</p> <p>Some Surplus = 2.60 - 1.81</p> <p>Elementary - Intermediate 2.57</p> <p>Elementary - Kindergarten 2.54</p> <p>Speech Education 2.50</p> <p>Elementary - Primary 2.47</p> <p>Journalism Education 2.00</p> <p>Library Science/Media Tech. 2.00</p> <p>Considerable Surplus = 1.80 - 1.00</p> <p>None</p> <p>No Data</p> <p>Agriculture</p> <p>Driver Education Traffic Safety</p> <p style="text-align: center;">Data Trends</p> <ul style="list-style-type: none"> ❖ All special education fields except dual certification and early childhood, as well as physics, chemistry, mathematics, general science, computer science, bilingual education, and occupational therapist are reported as in “considerable shortage.” ❖ Administrative shortages were identified for superintendent and principals at all levels. ❖ Kindergarten, primary, intermediate, speech education, journalism, and library science/media technology are reported as in “some surplus.” <p style="text-align: center;">Observations and Comments</p> <ul style="list-style-type: none"> ❖ Teachers in Maine continue to postpone their retirements. ❖ Candidates in Massachusetts are having difficulty passing the test for education licensure. ❖ The downturn in the Massachusetts economy has created a tight job market for early childhood and elementary candidates.
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Appendix C

Participants in the 2002 AAEE Supply and Demand Study

Region 1

Boise State University
Central Washington University
Eastern Oregon University
Gonzaga University
Lewis and Clark College
Lewis-Clark State College
Seattle University
Southern Oregon University
University of Puget Sound
Western Washington University
Whitworth College
Willamette University

Region 2

Arizona State University
Brigham Young University
California State Poly. Univ.
California State Univ. - Bakersfield
California State Univ. - Fresno
California State Univ. - Hayward
California State Univ. - Long Beach
California State Univ. - Sacramento
California State Univ. - San Marcos
Humboldt State University
Northern Arizona University
San Francisco State University
Southern Utah University
University of California-Berkeley
University of California-Davis
University of Nevada-Reno
University of San Francisco
Weber State University
Westminster College of Salt Lake City

Region 3

Carroll College
College of the Southwest
Colorado College
Colorado State University
New Mexico State University
University of Colorado at Denver
University of Great Falls
University of Montana
University of Montana - Western
University of New Mexico
University of Northern Colorado

Region 4

Augustana College
Baker University
Bemidji State University
Bethany College
Central College
Chadron State College
Coe College
College of Saint Catherine
College of St. Benedict
Columbia College
Concordia College
Cornell College
Creighton University
Crown College
Dana College
Dordt College
Drake University
Fort Hays State University

Gustavus Adolphus College
Iowa State University
Jamestown College
Luther College
Macalester College
Mayville State University
MidAmerica Nazarene University
Midland Lutheran College
Minnesota State University, Mankato
Minot State University
Mount Mercy College
Nebraska Wesleyan University
North Dakota State University
Northern State University
Northwestern College
Peru State College
Pittsburg State University
Simpson College
South Dakota State University
Southeast Missouri State University
Southwest Baptist University
Southwest Missouri State University
Southwest State University
University of Iowa
University of Kansas
University of Mary
University of Minnesota-Morris
University of Minnesota-Twin Cities
University of Missouri-Columbia
University of Missouri-Kansas City
University of Missouri-Saint Louis
University of Nebraska-Kearney
University of Nebraska-Lincoln
University of North Dakota
University of Northern Iowa
Valley City State University
Washburn University
Wayne State College
William Jewell College
Winona State University

Region 5

Abilene Christian University
Angelo State University
Arkansas State University
Arkansas Tech University
Hardin-Simmons University
Harding University
Louisiana State University in Shreveport
Oklahoma State University
Ouachita Baptist University
Southwest Texas State University
Southwestern University
St. Mary's University
Stephen F. Austin State University
Tarleton State University
Texas A&M University-Commerce
Texas A&M University-Corpus Christi
Texas Christian University
Texas Lutheran University
Texas Tech University
Texas Woman's University
University of Arkansas
University of Houston-Clear Lake
University of North Texas
University of Texas at Arlington

University of Texas at Dallas
University of Texas at El Paso
West Texas A & M University

Region 6

Alabama A&M University
Alcorn State University
Athens State University
Clemson University
College of Charleston
Duke University
Georgetown College
Georgia Southern University
High Point University
James Madison University
Marshall University
Middle Tennessee State University
Mississippi State University
Murray State University
Northern Kentucky University
Shepherd College
Tennessee Technological University
University of Georgia
University of Memphis
University of North Carolina at Wilmington
University of South Alabama
University of Southern Mississippi
University of Tennessee at Chattanooga
University of West Alabama
West Virginia State College
West Virginia University
Western Carolina University
Western Kentucky University
William Carey College

Region 7

Adrian College
Anderson University
Aquinas College
Ashland University
Augustana College
Ball State University
Bluffton College
Butler University
Carthage College
Central Michigan University
Cleveland State University
College of Mount Saint Joseph
Defiance College
Denison University
DePauw University
Eastern Illinois University
Eastern Michigan University
Grand Valley State University
Heidelberg College
Hiram College
Huntington College
Illinois Wesleyan University
Indiana University Bloomington
John Carroll University
Judson College
Kent State University
Knox College
Lakeland College
Lawrence University
Malone College
Manchester College

Marian College of Fond du Lac
Marietta College
McKendree College
Miami University
Monmouth College
Mount Vernon Nazarene University
North Central College
Northeastern Illinois University
Northern Illinois University
Northern Michigan University
Oakland University
Ohio Northern University
Ohio State University
Purdue University
Purdue University Calumet
Saint Mary's College
Saint Mary-of-the-Woods College
Shawnee State University
Silver Lake College
Southern Illinois Univ. at Carbondale
Spring Arbor University
St. Norbert College
University of Akron
University of Findlay
University of Illinois at Springfield
University of Illinois at Urbana-Champaign
University of Michigan
University of Saint Francis
University of Toledo
University of Wisconsin-Green Bay
University of Wisconsin-La Crosse
University of Wisconsin-Oshkosh
University of Wisconsin-Parkside
University of Wisconsin-River Falls
University of Wisconsin-Stout
University of Wisconsin-Superior
Ursuline College
Valparaiso University
Viterbo University
Western Illinois University
Wheaton College
Wilmington College
Wittenberg University
Wright State University
Xavier University
Youngstown State University

Region 8

Alfred University
Alvernia College
Bloomsburg University
California University of Pennsylvania
Canisius College
Clarion University of Pennsylvania
College of Saint Rose
Cornell University
Dickinson College
Edinboro University of Pennsylvania
Elizabethtown College
Elmira College
Gettysburg College
Holy Family College
Indiana University of Pennsylvania
Juniata College
King's College

Kutztown University of Pennsylvania
La Salle University
Lock Haven University
Long Island University
Mansfield University of Pennsylvania
Marist College
Marywood University
Messiah College
Moravian College
Muhlenberg College
Nazareth College of Rochester
New Jersey City University
Richard Stockton College
of New Jersey
Roberts Wesleyan College

Rutgers-The State Univ. of NJ
Rutgers-The State Univ. of NJ,
Camden
Slippery Rock University
St. Lawrence University
SUNY at Buffalo
SUNY at Potsdam
SUNY College at Brockport
SUNY College at Buffalo
SUNY College at Cortland
SUNY College at Fredonia
SUNY College at Geneseo
Syracuse University
Ursinus College

Utica College of Syracuse University
Villanova University
West Chester University of
Pennsylvania
Widener University
William Paterson University of NJ
York College of Pennsylvania

Region 9

Boston College
Central Connecticut State University
Eastern Connecticut State Univ.
Framingham State College
Franklin Pierce College

Harvard Grad. School of Education
Lesley University
Rhode Island College
Rivier College
Salve Regina University
Simmons College
Smith College
Southern Connecticut State Univ.
Springfield College
Tufts University
University of Maine
University of Southern Maine
University of Vermont
Wheelock College



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