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ABSTRACT

This publication examines the perceptions of school administrators in the Mid-Atlantic Association for School, College and University Staffing (MAASCUS) region, which includes Delaware, the District of Columbia, Maryland, New Jersey, New York, Pennsylvania, Virginia, and West Virginia. The report begins with an extensive literature review examining issues of teacher supply and demand. Certain certification areas have experienced a surplus of teachers, while others have experienced a shortage; some positions may require multiple certifications; needs also vary by geographic area. The paper explores the complexities and demands of teaching, the number of teachers needed, and student and teacher demographics. A total of 2,100 districts were sent surveys, with 380 responding. Data tables highlight teacher supply and demand by teaching field within each of the eight states in the study, categorizing teaching fields by surplus and shortage. Further analysis focuses on availability of employment opportunities; minority candidate availability; factors impacting 1995-96 employer needs, including funding, retirements, legislative mandates, demographics, student enrollment, private or home schooling, class size, and military mobilization; and sources of new hires. The report concludes that employment opportunities for teachers are influenced by certification area(s), geographic flexibility, school enrollment and diversity, and personal skills and abilities. Some of the most popular certification areas--elementary education, English, social studies, and health and physical education--have a significant surplus of teachers in the MAASCUS area that is likely to continue for the next several years. The market for minority teacher candidates, however, should be favorable since the supply of minority candidates is not increasing while the student population is becoming more diverse. (Contains 24 references.) (ND)

MAASCUS

Mid-Atlantic Association
for
School, College and University Staffing

Teacher Supply and Demand, A 1995 MAASCUS Research Report

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Another report which may be of interest is ***Perceptions of Preservice Teachers: The Job Market, Why Teaching, and Alternatives to Teaching***. This report is available, while supplies last, by sending a 9x12" self-addressed envelope with $3.00 of postage attached to John F. Snyder, Office of Career Services, Slippery Rock University, Slippery Rock, PA 16057. Be sure to indicate what report you are requesting. For ordering information about the annual ***ASCUS Teacher Supply and Demand in the United States*** report and other publications, contact ASCUS at 820 Davis Street, Suite 222, Evanston, IL 60201-4445. MAASCUS and ASCUS are not-for-profit associations serving career services officials and school personnel administrators.

TEACHER SUPPLY AND DEMAND, A 1995 MAASCUS RESEARCH REPORT

The issue of teacher supply and demand is a complex one that goes beyond simply comparing the number of yearly vacancies to the number of newly prepared teachers. Teachers earn a certificate to teach in specific subject areas; all teachers are not allowed to teach all subjects. Thus supply and demand calculations must consider the certification area(s) in which teacher candidates are prepared. The Association for School, College and University Staffing (ASCUS) has tracked the supply and demand of educators according to teaching fields for several years based on the perceptions of college and university career services professionals.

Certain certification areas have experienced a surplus of teachers while others have experienced a shortage of teachers. Social Studies, Physical Education, Health Education, and Elementary Education are areas in which there are more teacher candidates than positions; Speech Pathology, Bilingual Education, and Special Education are areas that have a shortage of teacher candidates (ASCUS,1995). A recent Maryland study of supply and demand shows a need for teachers in Computer Science; English for Speakers of Other Languages; Mathematics; Science areas of Chemistry, General Science and Physical Science; Spanish; Special Education areas of Generic Special Education infant-grade 3, Generic Special Education grades 6-12, Severely and Profoundly Handicapped; Technology Education; and Speech Pathology (Maryland State Department of Education, 1994).

Since a school district vacancy may require teaching two or more subjects, an administrator may seek an individual who is certified to teach in two or more areas (ASCUS, 1995). The education major earning two or more certifications, however, typically has to invest additional time and money in preservice training. The education major, therefore, may not be able to afford the extra college credits necessary to earn multiple certifications.

Another factor in teacher supply and demand is geographic location. Just as some certification areas have a need for teachers, some geographic areas have grown in population while other areas have lost population. Generally, areas of increasing population experience a growth in school enrollment creating a need for more teachers. On the other hand, school districts experiencing decreased enrollment, may not replace teachers who leave (ASCUS, 1995) or may lay-off teachers. Even a need for teachers, however, does not mean that school districts will hire additional teachers. If budgets do not allow hiring, schools may increase class size or the number of periods taught, hire substitute or part-time teachers, or reassign staff (Choy, 1993).

This Mid-Atlantic Association for School, College and University Staffing (MAASCUS) *Teacher Supply and Demand Report* examines the perceptions of school administrators in the MAASCUS region, which includes Delaware, the District of Columbia, Maryland, New Jersey, New York, Pennsylvania, Virginia, and West Virginia.

THE PROFESSION OF TEACHING

In additional to teaching, schools provide a wide range of community programs from health clinics to food service to adult education. Teachers also are expected to be competent in a wide range of areas. The American Association of School Personnel Administrators (AASPA), acknowledging that society and the student population have become more complex and diverse, assigned a committee to examine the skills and knowledge teachers should possess to be effective educators. As a result of this examination, AASPA identifies 9 most critical knowledge areas, 11 most critical skills, and 66 most critical evidences of those knowledge areas and skills needed by a desired educator employee in the next five to 10 years (AASPA, 1995). See Table 1 on the next page.

The AASPA statements illustrate the complexities and demands of teaching. Choy (1993) examines data from 1987-88 and finds that 28% of newly qualified teachers do not even apply for teaching jobs. Twenty-one percent (21%) of these teachers want to obtain more education before applying for a teaching position and 5% feel they were not yet ready for a job. Other reasons for not entering the job market include: 21% have no interest in teaching; 6% are discouraged by their student teaching experiences; 7% are offered jobs with larger salaries or more prestige; 6% do not like their

Table 1

KNOWLEDGE AREAS AND SKILLS NEEDED BY EFFECTIVE EDUCATORS

MOST CRITICAL KNOWLEDGE STATEMENTS*

1. Know the subject(s) they teach and how they are related to other subjects.
2. Know how to teach the subject(s) to students.
3. Know how to assess student progress on a regular basis.
4. Know how to plan lessons in a logical sequence.
5. Know how to reflect on their teaching and devise ways of improving it on an ongoing basis.
6. Know how to collaborate with other educators to create the complete educational environment possible for students.
7. Know how to use the technology available to us today, at an intermediate level minimally.
8. Know and appreciate various cultures, and the larger global society and how to establish rapport with a diverse population of students and parents.
9. Know how and where to get needed information and how to educate students to seek and evaluate information.

MOST CRITICAL SKILL STATEMENTS*

1. Ability to recognize and respond to individual differences in students.
2. Ability to implement a variety of teaching methods that result in high student achievement.
3. Ability to work cooperatively with parents, colleagues, support staff and supervisors.
4. Ability to display genuine love of teaching students (enthusiasm).
5. Ability to implement full inclusion techniques for special education students.
6. Ability to differentiate for variety of developmental stages and ability levels.
7. Ability to write, speak and present well.
8. Ability to develop critical thinking skills with students.
9. Ability and willingness to relate to parents and other community members, individual and corporate, in a positive and helpful fashion.
10. Ability to know and utilize technology in the teaching and learning process.
11. Ability to implement conflict-resolution strategies for both adults and students.

*For each knowledge and skill statement, AASPA provides evidence statements which are not included in this table.

teaching conditions; 3% report that teaching positions are too difficult to get; and 32% have various other reasons.

In response to increasing professional demands, teacher certification programs are moving to five-year master's degree requirements. Both the Carnegie Forum on Education and the Holmes Group have proposed that all teachers receive a four-year comprehensive liberal arts education followed by teacher education courses at the graduate level (Choy, 1993). This allows more time for academic study and up to a full year internship as a student teacher. Baker and Andrew (1993) find the most resounding difference between four-year and five-year program graduates in their sample to be a commitment to the profession. "Five-year graduates are significantly more likely to enter teaching and remain in the profession, information that should be noted by policy makers in both K-12 and higher education." (p.16).

Regardless of the method, those enrolled in teacher education programs are investing time and

money preparing for a complex and demanding profession, and they want a teaching job as a result of their efforts (Zimpher, 1989; Herbster, *et al*, 1991).

NUMBER OF TEACHERS NEEDED

Table 2 contains the figures from the Bureau of Labor Statistics (1993) which indicate a projected increase in the number of teachers employed in 2005 in all areas including Pre K-K, Elementary, Secondary, and Special Education.

Table 2
Total Teacher Employment and Projected Employment 2005

Teachers	1992 Total Employment	2005 Projected Employment	% Change 1992-2005	Absolute Difference 1992-2005
Pre-K & K	433,751	669,454	54.34	235,708
Elementary	1,456,156	1,766,719	21.33	310,563
Special	358,127	624,708	74.44	266,581
Secondary	1,262,861	1,724,454	36.55	461,543

Source: U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C., 1993.

In the 1980s and early 1990s, research and the popular media predicted a shortage of teachers. Papers presented by education professors at national conferences (Herbster, *et al*, 1991) and articles written in education journals (Braun, *et al*, 1990) supported the prediction. Yet those graduating from education programs have been entering a competitive market in many certification areas and geographic locations (ASCUS, 1995). Connors (1993) finds in New York state that elementary education teachers competing for limited jobs feel frustration and anger over the market. Often they express a feeling of having been misled about opportunities in teaching.

Feistritzer (1993) summarizes what happened:

> For a decade now, alarms have been going off around the country that the United States was running out of teachers, especially good ones. A severe shortage was predicted for the early 1990s...But that is not happening. What is happening is that the dwindling supply is being replenished, sometimes from untraditional sources, and the demand for more and better teachers is being met. Although some large urban areas report having difficulty finding all the teachers they want, and some subject areas, such as special education, are harder to find teachers for than others, no national teacher shortage has developed. (p. 18)

Stories of a shortage of teachers are again appearing in the media. A popular publication on college campuses, *The Wall Street Journal's Managing Your Career*, Spring/Summer 1995 edition, features an article entitled "Teaching Boom: A surprising solution to the career puzzle" (Thompson, 1995). The subtitle claims, "Your major isn't important, as more states ease certification requirements." The article then highlights in a box, "As teacher shortages grow more severe, it will become even easier for students who never took education courses to land teaching positions." (p. 10,11) The May 1995 issue of *Community Jobs, The National Employment Newspaper for the Non-Profit Sector*, features a front page article about careers in education (Keating, 1995). The highlighted text accompanying the article reads, "Vacancies are expected to open up in schools nationwide because the retirement rate for older teachers is predicted to skyrocket in the next ten years." (p. 1)

The numbers indicating a need for more teachers can be misleading, however, because new hires do not necessarily mean they are newly certified teachers (Choy, 1993; Feistritzer, 1993). Feistritzer points out that previous projections of a shortage of teachers were based on an unspoken assumption that "new teacher" meant "new teacher graduate." However, NCES data show that between 1988 and 1991, both public and private schools hired proportionally more first-time teachers and proportionally fewer reentrants. (NCES, 1995).

Still, several studies indicate that the reserve pool of teachers, which includes those substitute teaching, those certified but not teaching, and those returning to teaching after an absence, will provide a significant supply for most anticipated future needs (Arnold & Bobbitt, 1993; Oregon Department of Education, 1992: New York State Department of Education, 1992; Bobbitt, *et al*, 1994).

The reserve pool may continue to replenish many needs since 14.7% of public school teachers who left the profession in 1990-1992 (Bobbitt, *et al*, 1994) and 18% who left in 1987-1989 plan to return to teaching (Choy, 1993). Data from NCES and the National Center for Education Information show that about one-third of new teachers are actually former teachers coming back into the profession (Feistritzer, 1993). Transfers from one school to another account for 54.1% of new hires. The 1987 NCES's Schools and Staffing Surveys show that new teacher graduates actually constitute only about 10.5% of new hires (Choy, 1993). Of teachers transferring from one school to another, 47.2% of private school transfers move to public schools providing another source of teachers for public schools. Only 5.7% of public school teacher transfers move to private schools (Bobbitt, *et al*, 1994).

Caution must be used in estimating the reserve pool since not all individuals who are certified want to teach (Choy, 1993). Studies in New York (New York State Department of Education, 1992), Pennsylvania (Strauss, 1993), Indiana (Grissmer & Kirby, 1991), and Oregon (Oregon Department of Education, 1992), however, conclude that reserve pools in these states should cover any projected shortages. Strauss (1993) writes about Pennsylvania, "By the close of the decade, Pennsylvania's public school districts may turn over between 48% to 80% of their current inventory of teachers ... While there is likely to be significant more hiring done in the remainder of this decade, when one compares these projections of teacher demand to the likely sources of teacher supply -- newly trained teachers and the inventory of certificated individuals who are not teaching -- it is difficult to conclude there will be teacher shortages in the sense that districts will be unable to find certificated teachers." (p. 93) He also writes, however, "Given the generally aging of the teacher force in the 1980's and the projected enrollment growth in the balance of the decade, it is not clear whether or not the historical relationships of excess supply found in the 1980's will continue into the 1990's." (p. 67)

STUDENT AND TEACHER DEMOGRAPHICS

The Bureau of Labor Statistics provides a profile of the 1994 teaching force in Table 3 on the next page.

As the BLS figures show, there is evidence that a fair number of teachers may be retiring within the next 10 years. Teachers in Pre-K & K and Special Education are somewhat younger than teachers in Elementary and Secondary Education. Figure 1 illustrates the percentage of 1994 teachers who are from 45-64 years old while Figure 2 illustrates the distribution of ages for each teaching group (see page 6).

Various school districts and states have implemented early retirement incentives which may create more opportunities for those trying to enter the profession. Many respondents to the *1994 ASCUS Supply and Demand Report* indicate that early retirements are creating job vacancies. Other respondents, however, comment that not as many teachers as expected are taking early retirement (ASCUS, 1995).

The majority of teachers are white and female (Blank, 1994; Zimpher, 1989). Likewise, the majority of the population enrolled in college teacher preparation programs are white and female. For

example, a 1995 MAASCUS survey of nearly 3,000 preservice teachers in 25 colleges and universities in Pennsylvania, New York, Maryland, Virginia, New Jersey, and Delaware results in the surveyed population being 95% white and 74% female (Snyder, Doerr, & Pastor, 1995). Other preservice teacher surveys reflect the same white and female majority.

Table 3

Selected Occupational Characteristics for Teachers, 1994
(in thousands)

		Pre-K & K		Elementary		Secondary		Special	
		#	%	#	%	#	%	#*	%
Total Employed		496	100	1,632	100	1,202	100	311	100
Gender	Males	10	2.0	237	14.5	535	44.6	51	16.3
	Females	487	98.0	1,396	85.5	666	55.4	260	83.7
Race	White	423	85.1	1,435	87.9	1,087	90.4	283	91.2
	Black	55	11.1	167	10.2	90	7.5	22	7.1
	Other	4	0.9	5	0.3	5	0.4	1	0.5
	Hispanic	29	5.8	67	4.1	49	4.0	12	3.9
Age	20-24	72	14.5	84	5.2	49	4.1	16	5.1
	25-34	132	26.6	371	22.7	236	19.7	75	24.3
	35-44	156	31.4	508	31.2	401	33.4	111	35.6
	45-54	83	16.7	494	30.2	388	32.3	82	26.2
	55-64	32	6.4	155	9.5	112	9.3	24	7.7
Degree	Bachelor's	197	39.7	894	54.8	594	49.4	136	43.8
	Master's	70	14.1	610	37.4	514	42.8	146	47.1
	Doctorate	2	0.3	27	1.6	34	2.8	7	2.3
Part-time employed		174	34.9	265	16.3	183	15.2	53	17.1
Median age		37.1	-	42.7	-	43.4	-	41.5	-

Source: U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C., 1995.

Zimpher (1989) and Gilbert (1995) also point out that the majority of teachers are monolingual. Pallas, Natriello, and McDill (1989) project that from 1982 to 2020 the number of white non-Hispanic youth under the age of 18 will decline 13% while the number of Hispanic children will more than triple. The population of black youth is expected to increase 22% as the population of other races increases 69%. The proportion of children who speak a primary language other than English is anticipated to rise from about 2.5% in 1982 to about 7.5% in 2020. Boyd and Raffel (1990) write that almost every one of the largest cities in the United States has a predominantly minority enrollment with a high percentage of students whose first language is not English. These children speak 110 languages. Currently, states attracting the largest number of immigrants, namely California, Florida, New York, and Illinois, are struggling with how to educate these children.

Figure 1

Percent of 1994 Teachers Aged 45-64

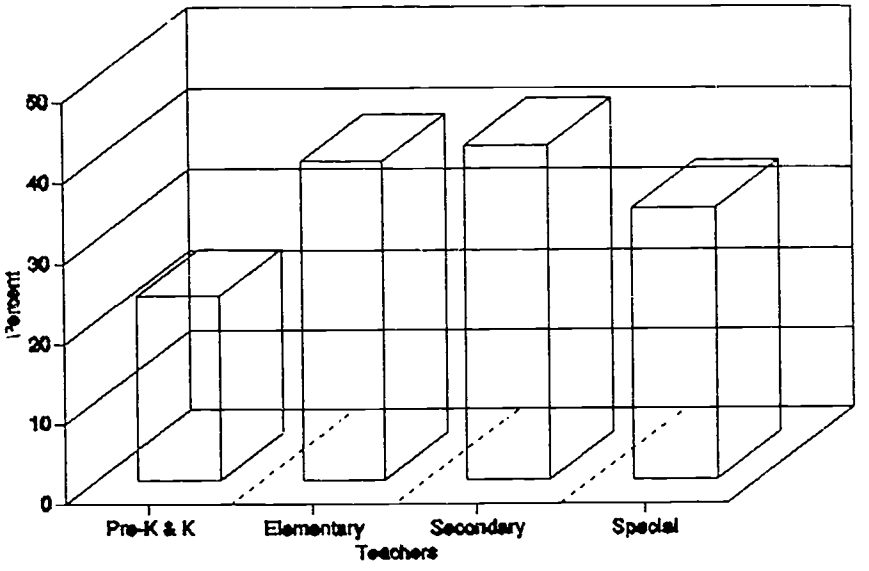
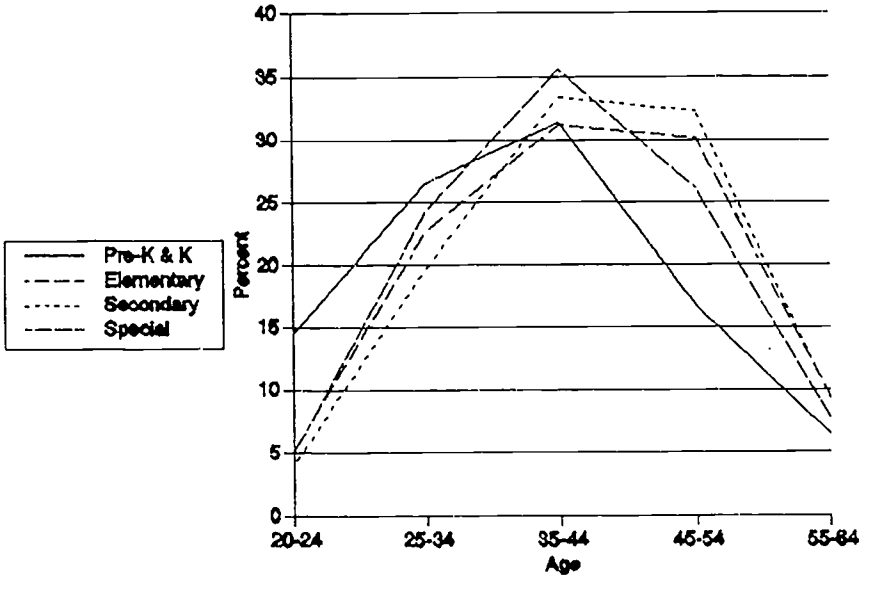


Figure 2

Distribution of Ages for 1994 Teachers



While the school enrollment is becoming more diversified, the current teachers employed and preservice teachers enrolled in teacher education programs are not (Choy, 1993; Zimpher, 1989; ASCUS, 1995). The reserve pool also lacks a significant number of minority teachers (Arnold & Bobbitt, 1993; Oregon Department of Education, 1992). In order to balance teaching staffs in terms of race and gender, administrators often seek minorities for teaching positions. Minority teaching candidates may be in demand even in certification areas with a surplus of teachers. For example, an administrator may actively seek a male elementary education teacher (Connors, 1993). The number of minority teaching candidates entering teacher education programs has not increased despite local, state, and national recruitment efforts (Zimpher, 1989; ASCUS, 1995).

According to 1990-91 NCES data, 15,358 school districts deliver education to 41,223,804 students. Only 0.1% (21 of 15,358) of all school districts in the United States enroll 11.2% of all students. Adding school districts that enroll 10,000 students and up results in 4.5% of all school districts enrolling almost half (47.1%) of all the total students enrolled. More than half (8,260) of all school districts enroll fewer than 1,000 students each and account for only 7.3% of the total school enrollment (Feistritzer, 1993). Opportunities for employment in these districts are naturally limited since they hire relatively few new teachers when compared to the larger districts,

Many of these larger districts are in urban areas where the student population is more diverse. Data from 1987 show that in 23 of the largest 25 cities, the majority of students come from minority populations (Zimpher, 1989). Most enrolled in teacher preparation programs are from rural or suburban backgrounds. Often these preservice teachers desire to return to rural or suburban districts as teachers, and most lack any field experiences in urban teaching (Gilbert, 1995). Data from the American Association for Colleges of Teacher Education show that only 4% of preservice teachers want to teach in inner cities (Feistritzer, 1993). Choy (1993) reports that administrators in urban areas find it generally difficult to fill teaching vacancies.

Despite what appears to be more than enough of a supply of teachers being trained through traditional education programs and the reserve pool, alternative certification programs provide a means for persons who already have at least a bachelor's degree in a field other than education to earn a certificate to teach. These alternative certification programs attract a larger number of minorities than traditional education programs. In New Jersey, the state's use of an alternative route has been the biggest source of minority teachers. In Texas, 43% of teachers entering the profession through alternative programs are minority. Data show that persons going through alternative certification programs are much more interested in working in inner cities. For example, half of alternative-route teachers in both Texas and New Jersey are teaching in inner cities (Feistritzer, 1993).

The review of literature illustrates the complexities of teacher supply and demand. Although this review does not address all of the issues influencing supply and demand, it does provide a structure by which to keep the results of the 1995 MAASCUS survey in perspective.

Table 4: 1995 MAASCUS Teacher Supply and Demand by Field and State

Demand Codes: 5 = Considerable shortage of teachers; 4 = Some shortage; 3 = Balanced; 2 = Some surplus; 1 = Considerable surplus of teachers

The average is provided as a three digit number followed by the number of districts responding for that field in ().

Teaching Field	DE	MD	NJ	NY	PA	VA	WV	NO ID.	Total
1. Agriculture	3.63 (8)	3.64 (11)	2.75 (8)	3.64 (22)	3.37 (27)	3.79 (19)	3.14 (7)	4.50 (2)	3.51 (104)
2. Art/Visual	2.43 (7)	2.67 (15)	2.27 (52)	2.26 (90)	2.53 (57)	2.90 (29)	2.50 (8)	3.00 (1)	2.43 (259)
3. Audiology	4.00 (4)	4.25 (8)	3.39 (13)	3.46 (33)	3.35 (20)	4.06 (16)	4.50 (6)	5.00 (1)	3.68 (101)
4. Bilingual Education	3.75 (4)	3.50 (8)	3.93 (40)	3.46 (41)	3.70 (33)	3.59 (17)	4.50 (2)	4.00 (1)	3.69 (146)
5. Business Education	3.11 (9)	2.50 (14)	2.13 (39)	2.46 (87)	2.85 (59)	2.53 (32)	2.25 (8)	3.50 (2)	2.54 (250)
6. Computer Science/Education	3.75 (8)	3.23 (13)	3.28 (51)	2.90 (80)	3.43 (60)	3.32 (28)	3.57 (7)	3.50 (2)	3.22 (249)
7. Counselor Education	3.00 (9)	3.07 (14)	2.95 (43)	2.63 (90)	2.98 (63)	3.03 (33)	3.33 (9)	3.00 (2)	2.88 (263)
8. Dance Education	3.00 (1)	3.33 (6)	2.82 (11)	2.29 (17)	3.00 (19)	3.00 (7)	3.00 (2)	3.00 (1)	2.81 (64)
9. Driver Education	3.13 (8)	2.75 (4)	2.28 (18)	3.09 (44)	2.98 (45)	2.44 (27)	2.86 (7)	3.00 (2)	2.79 (155)
10. Elementary - Pre-K	2.29 (7)	1.57 (14)	1.61 (41)	1.24 (71)	1.45 (49)	1.80 (30)	2.56 (9)	1.50 (2)	1.54 (223)
11. Elementary - Kindergarten	2.14 (7)	1.47 (17)	1.31 (55)	1.17 (102)	1.24 (63)	1.57 (35)	1.56 (9)	1.50 (2)	1.31 (290)
12. Elementary - Primary	1.75 (8)	1.17 (18)	1.17 (60)	1.09 (113)	1.13 (67)	1.56 (36)	1.38 (8)	2.00 (2)	1.20 (312)
13. Elementary - Intermediate	1.63 (8)	1.29 (17)	1.27 (55)	1.08 (109)	1.20 (66)	1.71 (34)	1.22 (9)	1.50 (2)	1.25 (300)
14. Elementary - Middle Grades	2.13 (8)	1.69 (16)	1.35 (51)	1.24 (93)	1.41 (66)	2.08 (36)	1.25 (8)	3.00 (2)	1.47 (280)
15. English/Language Arts	2.50 (10)	1.93 (14)	1.60 (50)	1.70 (96)	1.94 (65)	2.09 (33)	1.89 (9)	3.00 (2)	1.84 (279)
16. English as a 2nd Language (ESL)	3.57 (7)	3.64 (11)	3.68 (47)	3.27 (63)	3.12 (41)	3.69 (26)	5.00 (2)	4.00 (1)	3.44 (198)
17. Gifted/Talented Education	3.67 (9)	3.25 (8)	2.88 (48)	2.90 (72)	3.02 (61)	3.42 (26)	3.13 (8)	4.00 (1)	3.04 (233)
18. Health Education	1.88 (8)	2.73 (15)	2.04 (52)	2.68 (96)	2.20 (59)	2.15 (27)	1.75 (8)	3.00 (2)	2.35 (267)
19. Home Economics/Family Studies	3.22 (9)	3.86 (14)	2.50 (42)	2.98 (88)	3.07 (60)	3.12 (34)	2.38 (8)	4.00 (1)	2.98 (256)
20. Journalism	3.14 (7)	3.13 (8)	2.44 (25)	2.29 (35)	2.56 (43)	2.73 (26)	3.14 (7)	4.50 (2)	2.61 (153)
21. Languages - Classics	3.50 (4)	4.00 (8)	3.13 (24)	3.18 (40)	3.58 (36)	3.37 (19)	4.00 (5)	4.00 (2)	3.40 (138)
22. Languages - French	3.29 (7)	3.14 (14)	2.69 (35)	3.09 (87)	3.32 (57)	3.69 (32)	3.50 (8)	4.00 (2)	3.19 (242)
23. Languages - German	3.40 (5)	3.36 (11)	2.93 (28)	3.18 (39)	3.65 (48)	3.79 (19)	2.75 (4)	4.00 (2)	3.37 (156)
24. Languages - Japanese	3.00 (2)	4.00 (5)	3.79 (19)	3.97 (29)	3.91 (23)	4.18 (17)	3.00 (2)	4.00 (2)	3.91 (99)
25. Languages - Russian	3.50 (2)	3.60 (5)	3.58 (19)	3.72 (25)	4.19 (27)	4.13 (15)	3.00 (2)	4.00 (1)	3.87 (96)

Teaching Field	DE	MD	NJ	NY	PA	VA	WV	NO ID.	Total
26. Languages - Spanish	3.22 (9)	4.00 (14)	2.65 (43)	2.94 (96)	3.15 (62)	3.76 (33)	3.50 (8)	4.00 (1)	3.13 (266)
27. Library Science	3.89 (9)	3.94 (16)	3.33 (51)	3.43 (93)	3.32 (59)	3.88 (33)	2.88 (8)	4.00 (2)	3.48 (271)
28. Mathematics	2.90 (10)	3.12 (17)	2.96 (55)	2.66 (96)	2.78 (71)	3.33 (36)	3.11 (9)	3.50 (2)	2.88 (296)
29. Music - Instrumental	3.00 (9)	3.07 (14)	2.46 (52)	2.72 (97)	2.77 (60)	3.13 (32)	2.11 (9)	3.00 (2)	2.74 (275)
30. Music - Vocal	3.00 (9)	3.13 (15)	2.47 (51)	2.72 (95)	2.68 (60)	2.91 (33)	2.11 (9)	3.00 (2)	2.70 (274)
31. Physical Education	1.44 (9)	1.82 (17)	1.71 (56)	1.77 (101)	1.86 (65)	1.77 (34)	1.44 (9)	2.00 (2)	1.77 (293)
32. Psychologist	3.89 (9)	4.00 (13)	3.43 (51)	3.54 (98)	3.54 (54)	3.41 (29)	3.56 (9)	4.50 (2)	3.55 (265)
33. Reading	2.86 (7)	3.36 (14)	2.57 (47)	2.51 (96)	2.85 (58)	3.13 (30)	2.89 (9)	4.00 (2)	2.75 (263)
34. Science - Biology	3.10 (10)	3.08 (12)	3.10 (42)	2.79 (92)	2.80 (61)	3.21 (33)	2.75 (8)	3.50 (2)	2.93 (260)
35. Science - Chemistry	3.70 (10)	4.14 (14)	3.66 (38)	3.07 (93)	3.67 (60)	3.66 (32)	3.63 (8)	4.50 (2)	3.48 (257)
36. Science - Earth/Physical	3.33 (9)	3.43 (14)	3.37 (41)	3.19 (92)	3.15 (60)	3.76 (33)	3.38 (8)	3.00 (2)	3.30 (259)
37. Science - General	3.00 (9)	2.87 (15)	3.16 (45)	2.61 (89)	2.85 (58)	3.30 (27)	3.25 (8)	3.00 (2)	2.89 (253)
38. Science - Physics	3.78 (9)	4.07 (14)	3.97 (36)	3.71 (89)	3.98 (59)	4.18 (33)	3.57 (7)	4.50 (2)	3.90 (249)
39. Social Sciences/Studies	1.11 (9)	1.33 (15)	1.63 (46)	1.65 (96)	1.51 (65)	1.74 (35)	1.50 (8)	2.00 (2)	1.59 (276)
40. Social Worker (School)	3.00 (4)	3.40 (5)	2.88 (50)	2.92 (73)	2.90 (31)	3.19 (27)	2.50 (4)	4.00 (2)	2.96 (196)
Special Education 41-47: 41. Behavioral Disorders	4.10 (10)	4.41 (17)	3.02 (45)	3.01 (78)	3.00 (51)	4.16 (32)	4.00 (9)	5.00 (2)	3.36 (242)
42. Hearing Impaired	4.57 (7)	3.73 (11)	3.39 (33)	3.39 (61)	3.44 (36)	4.21 (29)	4.17 (6)	5.00 (2)	3.64 (185)
43. Learning Disability	4.00 (10)	4.20 (15)	3.14 (51)	2.74 (97)	2.86 (59)	3.94 (35)	3.11 (9)	4.50 (2)	3.14 (278)
44. Mentally Handicapped	4.00 (10)	4.17 (12)	3.03 (39)	2.88 (76)	2.94 (53)	3.77 (31)	3.22 (9)	4.50 (2)	3.18 (232)
45. Multiply Handicapped	4.33 (6)	4.33 (12)	2.98 (42)	3.13 (69)	3.07 (43)	4.30 (30)	3.63 (8)	5.00 (1)	3.38 (211)
46. Physically Impaired	4.29 (7)	4.33 (12)	2.97 (33)	3.19 (62)	3.15 (40)	4.27 (26)	4.00 (8)	5.00 (2)	3.46 (190)
47. Visually Impaired	4.33 (6)	4.50 (12)	3.13 (30)	3.32 (60)	3.47 (36)	4.21 (28)	4.33 (6)	5.00 (2)	3.62 (180)
48. Speech/Drama/Theater	2.50 (4)	3.63 (8)	2.71 (31)	2.51 (41)	2.87 (38)	3.00 (25)	3.33 (6)	3.00 (2)	2.81 (155)
49. Speech Pathology	4.75 (8)	4.60 (15)	3.79 (48)	3.51 (85)	3.57 (46)	4.43 (35)	4.56 (9)	5.00 (2)	3.86 (248)
50. Technology Education (Ind. Arts)	3.88 (8)	4.47 (15)	3.00 (40)	3.43 (91)	3.83 (60)	3.74 (27)	3.13 (8)	4.00 (2)	3.56 (251)
51. Substitute Teachers*	4.30 (10)	3.00 (9)	2.59 (59)	2.66 (95)	2.82 (65)	3.18 (28)	2.88 (8)	3.00 (2)	2.82 (276)

*Not all MAASCUS states raquire substitute teachers to hold teaching certificates.

THE MAASCUS SURVEY

A four page survey with a return envelope was mailed to MAASCUS region school districts in April 1995. A follow-up postcard was mailed in late April to request that the surveys be completed and returned. A breakdown of responses by state follows:

State	Districts Surveyed	Districts Responding	%
DE	19	10	53
DC	1	0	0
MD	23	18	78
NJ	601	79	13
NY	766	137	18
PA	505	82	16
VA	130	40	31
WV	55	11	20
No ID*	-	3	-
Total	2100	380	18

*These surveys were returned without identifying information.
Six (6) surveys were returned after data had been inputted in the database and are not included in the above information nor in this report.

It is interesting to note how states organize their school districts. States such as Maryland and Virginia use a county school district while New Jersey, New York, and Pennsylvania have hundreds of local districts, many of them being very small. The states with fewer districts, except for West Virginia, returned a higher percentage of surveys. Perhaps a reason for the relatively low return rate for New Jersey, New York, and Pennsylvania is that for small districts, supply and demand is not an important issue. Some respondents from small schools districts commented that they had not hired a new teacher in years. This may be the case for many non-respondents, but there are no data to support or refute this thought.

For the teacher candidate, searching for a job in states with county districts is much easier with fewer applications to complete than looking in states with hundreds of local districts. Those seeking jobs in New York or New Jersey, for example, could not possibly apply to all districts even if they are heeding job search advice from career services professionals and school hiring officials to be geographical mobile.

Table 5

Teaching Fields with Considerable Teacher Shortage (5.00-4.21)	
None	
Teaching Fields with Some Shortage (4.20-3.41)	
Languages - Japanese	3.91
Science - Physics	3.90
Languages - Russian	3.87
Speech Pathology	3.86
Bilingual Education	3.69
Audiology	3.68
Special Education - Hearing Impaired	3.64
Special Education - Visually Impaired	3.62
Technology Education (Ind. Arts)	3.56
Psychologist	3.55
Agriculture	3.51
Library Science	3.48
Science - Chemistry	3.48
Special Education - Physically Impaired	3.46
English as a 2nd Language (ESL)	3.44
Teaching Fields with Balanced Supply and Demand (3.40-2.61)	
Languages - Classics	3.40
Special Education - Multiply Handicapped	3.38
Languages - German	3.37
Special Education - Behavioral Disorders	3.36
Computer Science/Education	3.22
Science - Earth/Physical	3.30
Languages - French	3.19
Special Education - Mentally Handicapped	3.18
Special Education - Learning Disability	3.14
Languages - Spanish	3.13
Gifted/Talented Education	3.04
Home Economics/Family Studies	2.98
Social Worker (School)	2.96
Science - Biology	2.93
Science - General	2.89
Counselor Education	2.88
Mathematics	2.88
Substitute Teachers	2.82
Dance Education	2.81
Speech/Drama/Theater	2.81
Driver Education	2.79
Reading	2.75
Music - Instrumental	2.74
Music - Vocal	2.70
Journalism	2.61
Teaching Fields with Some Surplus (2.60-1.81)	
Business Education	2.54
Art/Visual	2.43
Health Education	2.35
English/Language Arts	1.84
Teaching Fields with Considerable Surplus (1.80-1.00)	
Physical Education	1.77
Social Sciences/Studies	1.59
Elementary - Pre-K	1.54
Elementary - Middle Grades	1.47
Elementary - Kindergarten	1.31
Elementary - Intermediate	1.25
Elementary - Primary	1.20

TEACHER SUPPLY AND DEMAND BY FIELD AND STATE

This is the first extensive MAASCUS survey of school personnel to learn of their perceptions of the job market based on teaching fields. The teaching fields are the same as the ASCUS survey fields except for the additions of Field 14, Elementary - Middle Grades and Field 51, Substitute Teachers. Field 51 is added since many teachers gain experience through substitute teaching.

The results in Table 4 (pages 8 & 9) allow readers to compare the perceptions of school personnel by state. The column "No ID" includes the perceptions from three districts which returned surveys without identifying information. The "Total" column provides averages from all respondents.

Table 5 (page 11) arranges the teaching fields in order from those with **Considerable Shortage** (identified as averages 5.00-4.21), **Some Shortage** (4.20-3.41), **Balanced Supply and Demand** (3.40-2.61), **Some Surplus** (2.60-1.81), and **Considerable Surplus** (1.80-1.00). These categories are from the 1995 ASCUS Supply and Demand Report.

Fields with **Some Shortage** include specific subjects within Languages, Science, and Special Education areas. It should be noted, however, that not all teaching fields within these areas are in the **Some Shortage** category. Japanese, for example, has the highest score at 3.91, but both Spanish and French fall within the **Balanced** category with 3.13 and 3.19 respectively. The same holds true for Science and Special Education as some teaching fields are in the **Some Shortage** category and some are in the **Balanced** category. No teaching field in Languages, Science, and Special Education falls in the **Surplus** categories. Other **Some Shortage** teaching fields include Speech Pathology, Bilingual Education, Audiology, Technology Education, Psychologist, Agriculture, Library Science, and English as a Second Language.

Teaching fields falling in the **Some Surplus** category include Business Education, Art/Visual, and Health Education -- all fields where school districts employ a small number of teachers when compared to other departments. However, the other area in **Some Surplus**, English/Language Arts, employs a large number of teachers. In **Considerable Surplus** are Physical Education, Social Sciences/Studies, and all fields of Elementary Education from Pre-K to Intermediate Grades. Whereas the Elementary fields represent over half of the teachers currently employed and those projected to be employed in 2005 (see Table 2, page 3), this survey shows a large supply of Elementary Education teachers in all fields.

Since this is the first MAASCUS Supply and Demand Survey, there is no other year with which to compare data. However, "conventional wisdom" has indicated in the past that for secondary teachers, "Math" and "Science" were teaching fields to pursue. Table 5 shows that Math is in the **Balanced** category at 2.88, and as discussed previously, not all Science areas are in the **Some Shortage** category with Earth/Physical Science, Biology, and General Science scoring 3.30, 2.93, and 2.89 respectively.

Special Education is also starting to show signs of a more **Balanced** supply with some areas in the **Some Shortage** category and some in the **Balanced** category. All Special Education teaching fields, however, score 3.14 and higher.

Also of note is the relatively high score of Dance Education at 2.81 compared to Physical Education at 1.77. Dance Education, however, has the lowest number of respondents with 64 school representatives estimating the supply versus demand in this field (see Table 4). This seems to indicate that a smaller number of school districts employ teachers specifically as dance educators. The two other teaching fields drawing less than 100 respondents are Russian and Japanese. Whereas this indicates that a smaller number of schools employ teachers in these fields, the high scores of 3.87 and 3.91 indicate a need for teachers. It can be concluded that few teachers are prepared in Russian and/or Japanese while schools, which are experiencing diverse student enrollment increases, need these teachers. The need for Bilingual and English as a Second Language teachers may also be attributed to increased student diversity.

Other fields in the **Some Shortage** category worth noting are Technology Education, Agriculture, and Library Science. The need for teachers in these areas is probably not attributed as much to increased student enrollment as it is to fewer teachers being prepared in these areas. Home Economics/Family Studies is a field which may experience this same need for teachers in the future. The Maryland respondents, for example, listed Home Economics in the **Some Shortage** category with a 3.86 score. Respondents from other states, however, rank this field in the **Balanced** category.

AVAILABILITY OF EMPLOYMENT OPPORTUNITIES

School administrators rank the availability of employment opportunities for elementary and secondary teachers by responding to survey questions using a scale with values of much **better**, **better**, **same**, **worse**, and **much worse**.

When comparing the availability of employment opportunities for teachers at both the elementary and secondary level for the 1994-95 school year with employment availability for teachers in 1993-94, 52.8% of the school administrators responding to the survey indicate that elementary teachers have at least the same opportunities; 33.0% see these teachers as having worse or much worse opportunities for employment than one year earlier; and only 14.3% feel that employment opportunities for elementary teachers have improved and are better or much better than opportunities in 1993-94.

The availability of employment opportunities for secondary teachers is noted by 58.9% of the respondents as similar to that of one year earlier. Approximately twenty-five percent (25.2%) of the administrators think opportunities for employment are worse or much worse. Almost sixteen percent (15.9%) note better or much better employment opportunities for secondary teachers than one year ago. Comparing elementary to secondary teacher candidate employment opportunities, 1.6% of the administrators responding find the secondary teacher candidates' employment outlook more favorable than that of elementary teachers for the 1994-95 school year. Overall administrators perceive available opportunity to be slightly better for secondary teachers than elementary teachers. This slight variance between elementary and secondary teacher employment opportunity emanates from the higher percentage of school administrators' evaluations that secondary teacher candidates have the same or better availability of employment opportunity than elementary teacher candidates. These results are shown in Figure 3 on the next page.

The survey results, however, show that school administrators generally do not see improvement in employment opportunities over the last year for teachers. Indeed a high percentage of administrators, well over 80%, find that both elementary and secondary teacher candidates have the same or worse opportunity for employment than just one year ago.

Additionally, the survey results show a similar trend over the past four years. When evaluating the availability of employment opportunities for the 1990-91 school year compared to that of 1994-95, school administrators report a slightly higher availability of opportunities for both elementary and secondary teachers. Over thirty-one percent (31.6%) note that opportunities were the same for elementary teachers with 41.5% stating conditions are worse or much worse. Comparing these findings to the figures reported for the 1994-95 school year, a higher percentage, 12.6%, of the teacher candidates in 94-95 have either similar or worse availability of employment opportunities than candidates in 1990-91. Almost twenty-seven percent (26.8%) indicate that opportunities are better or much better during the 1994-95 school year than in 1990-91. Interestingly the percentage of school administrators perceiving conditions for employment at the extremes of better or worse are considerably higher in 1990-91 than just one year ago.

Figure 3: The availability of employment opportunities for elementary and secondary teachers for the 94-95 school year compared to those one year earlier (93-94)

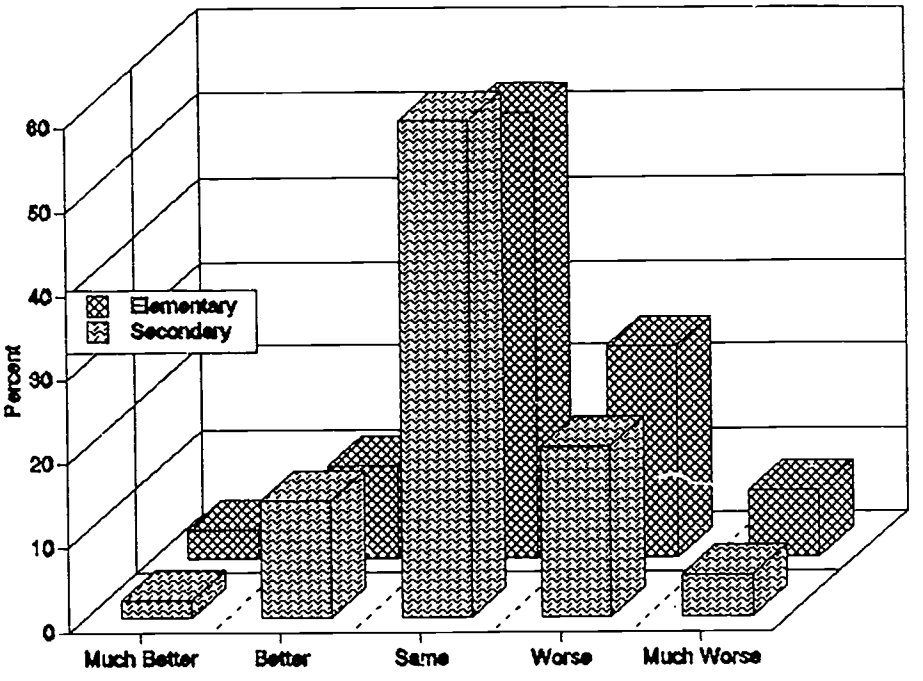


Figure 4: The availability of employment opportunities for elementary and secondary teachers for the 94-95 school year compared to those four years earlier (90-91)

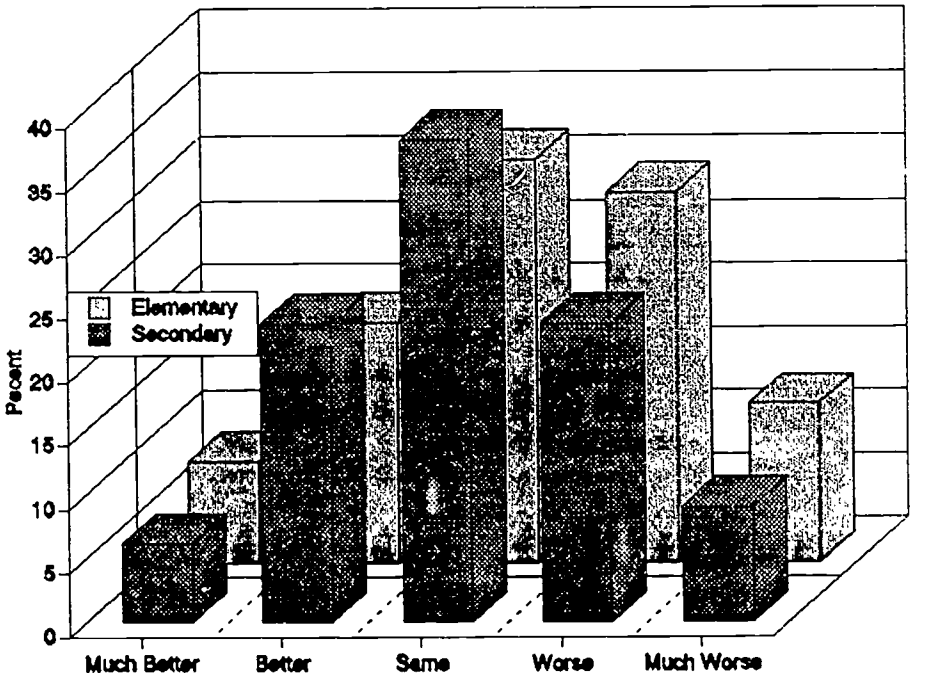


Figure 5: A comparison of expected employment opportunities for elementary and secondary teachers between 1994-95 and the approaching 95-96 school year

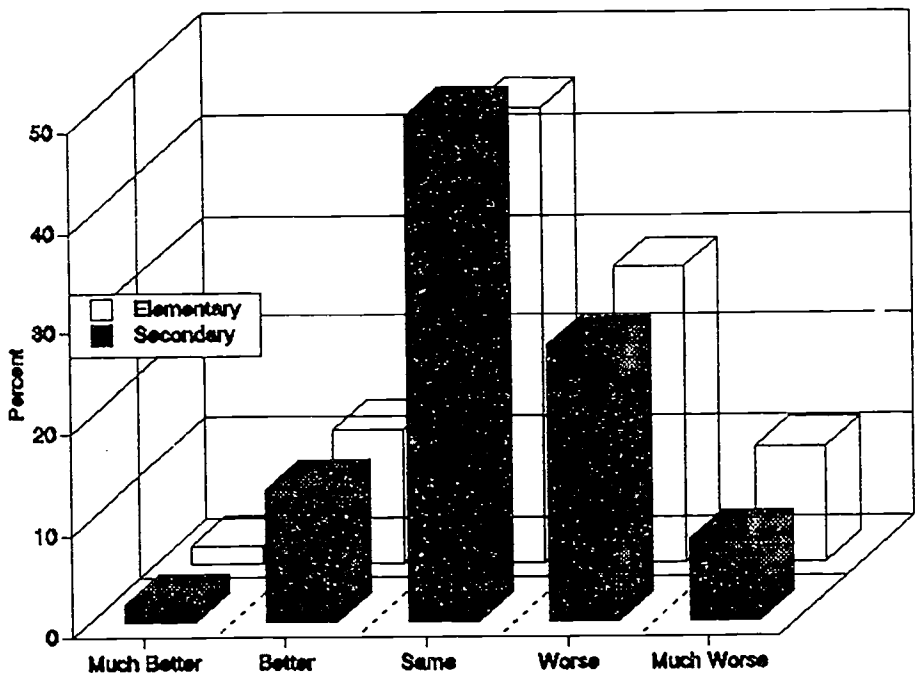
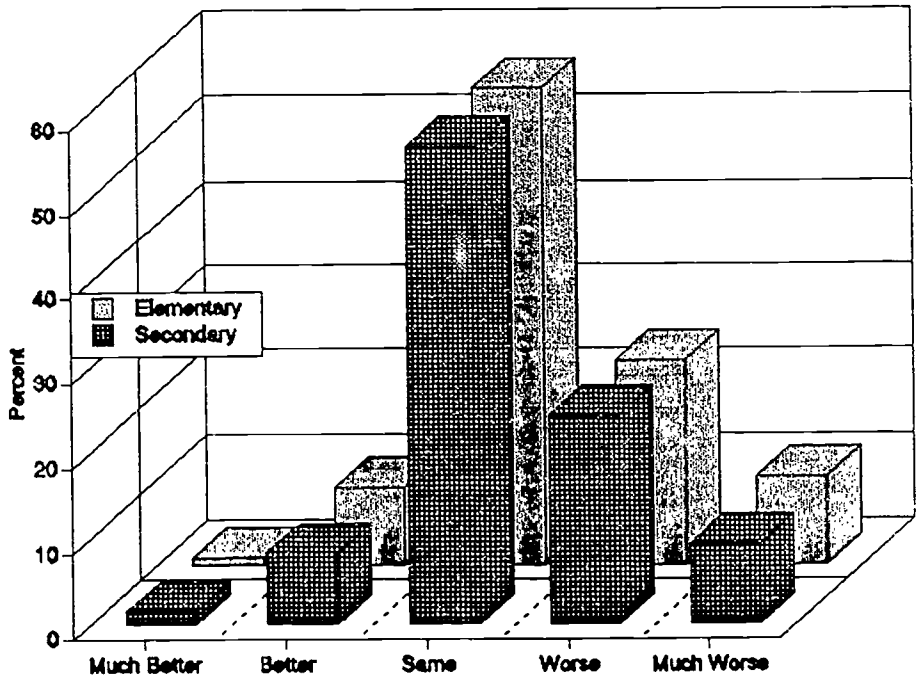


Figure 6: The expected availability of minority teaching candidates for the approaching 95-96 school year compared to the 94-95 school year



A similar trend is found in the survey results for secondary teacher candidates. Almost thirty-eight percent (37.8%) of the school administrators find opportunities for secondary teacher employment to be the same four years ago as during the 1994-95 school year. Over thirty-two percent (32.5%) see employment opportunities as worse, a 7.3% increase over the figure shown for 1994-95. Almost thirty percent (29.7%) state employment opportunities are better today than in 1990-91. These results are shown in Figure 4 on page 14. The survey results for 1994-95 show a decrease of 13.8% in the number of school administrators reporting that secondary educators have much more employment opportunity availability than in the 1990-91 school year.

The survey results reflect an apparent perception by school administrators that employment opportunities for teachers at both the elementary and secondary level are generally not improving. Approximately 50% of the administrators responding to the survey see employment opportunities as remaining the same during the last year while only 30% saw conditions remaining the same four years ago. Additionally, there is at least a 10% drop in the number of administrators reporting better or much better employment opportunities during this past year compared to four years earlier.

This same trend is reflected in the projected availability of employment opportunities for the forthcoming school year, 1995-96. When school administrators estimate the availability of opportunities for employment for teachers for the next year, 85.2% of the respondents note that both the elementary and secondary teachers will find opportunities either the same or worse than in the past. Elementary teachers, it is noted by 45.0% of the administrators, have a similar opportunity for employment next year as during this past school year. Over forty percent (40.2%) state employment opportunities will be worse or much worse. Fifty percent (50.0%) feel secondary teachers will have the same opportunity during the 1995-96 school year while 35.2% feel employment opportunity will be worse or much worse. Slightly less than 15.0% feel that both groups of teachers, elementary and secondary, have a chance of better employment opportunity availability next year. These results are shown in Figure 5 on page 15.

The school administrators responding to this survey indicate that the trend in employment opportunities for teachers for the 1995-96 school year will not improve. Although many administrators report that opportunities will remain the same, an increasing number report conditions as becoming worse.

Trends in employment opportunity for teachers as reflected in the responses of school administrators show little, if any, improvement in availability of teaching positions for teacher candidates. Employment availability is generally expected to remain the same or become worse over the next year. Unless the projected trend in availability of employment opportunity deviates from that reported by school administrators, teaching positions are not expected to be readily available to either elementary or secondary teachers seeking employment.

MINORITY CANDIDATE AVAILABILITY

School administrators responding note that they expect the availability of minority teaching candidates to remain the same or to become worse throughout the next year. When comparing the availability of minority candidates in the 1994-95 school year to that of the 1995-96 school year, 90% of those responding see availability at both the elementary and secondary level as the same or worse; approximately 45% report minority teacher candidate availability as worse or much worse; and only about 10% anticipate an increase in the availability of minority candidates. The number of minority candidates available for employment does not appear to be improving. The continued lack of available candidates is reflected in the low percentage of school administrators who predict an increase in availability of minority candidates for the 1995-96 school year. These results are shown in Figure 6 on page 15.

The results for the survey questions related to the availability of employment opportunities for teacher candidates for the 1994-95 school year compared to 1990-91, 1993-94, and the projected school year, 1995-96, are presented in Table 6 below. The expected availability of minority candidates for employment by school systems as teachers for 1995-96 compared to minority candidate availability during the 1994-95 school year is also included in this table.

Table 6:

. Availability of Teacher Candidate Employment Opportunities

Teacher Candidate Availability Compared to 1994-95							Minority Availability	
Employment Opportunities	90-91		93-94		95-96		1995-1996	
	Elem	Sec	Elem	Sec	Elem	Sec	Elem	Sec
Much better	3.4%	2.1%	7.9%	6.2%	1.7%	8.0%	0.9%	1.6%
Better	10.9%	13.8%	18.9%	23.5%	13.1%	27.2%	9.0%	8.4%
Same	52.8%	58.9%	31.6%	37.8%	45.0%	50.0%	56.0%	56.3%
Worse	25.1%	20.2%	29.1%	23.5%	29.1%	13.0%	23.9%	24.4%
Much worse	7.8%	4.9%	12.4%	9.0%	11.2%	1.9%	10.2%	9.4%
Total	100.0%	99.9%	99.9%	100.0%	100.1%	100.1%	100.0%	100.1%

FACTORS IMPACTING 1995-96 EMPLOYMENT NEEDS

This section of the report comments on the results in Table 7 below.

Table 7

Percent of Respondents Indicating Factors Impacting 1995-96 Employment Needs

Factor	Employment Increased	Employment Reduced	No Change
Federal Funding	2.5%	40.0%	57.5%
State Funding	6.6%	40.5%	52.9%
Local Funding	14.9%	34.9%	50.3%
Postponed Retirement	5.0%	20.6%	74.3%
Routine Retirement	21.9%	8.8%	69.3%
Early Retirement	23.9%	8.5%	67.6%
Legislative Mandates	9.5%	14.9%	75.6%
Local School Reform	10.8%	14.4%	74.8%
Immigration	14.3%	6.9%	78.9%
Rural/Suburban/Urban Shifts	16.1%	4.9%	79.0%
Student Enrollment	48.0%	9.6%	42.4%
Private or Home Schooling	2.9%	8.6%	88.5%
Class Size	21.4%	10.0%	68.5%
Military Demobilization	0.3%	5.8%	93.9%

Federal, State, and Local Funding

In general, Federal, state, and local funding sources cause a reduction in employment needs. It is interesting to note that where increases are seen, local funding is more responsible than state or federal sources. However, more than half of the respondents (53.6% overall) feel that there is no change in employment needs resulting from federal, state, or local financing.

Retirement

While most respondents (70.4%) feel that retirement decisions of any type have little impact upon employment needs, 20.6% feel that postponed retirements decrease employment needs, 21.9% feel that regular retirements increase employment needs, and 23.9 feel that early retirements also increase employment needs. These results present no surprises.

Legislative Mandates and Local School Reforms/Restructuring

Aside from a slight skewing toward "employment reduced", there are no significant trends within these two categories.

Demographic Shifts in Population

Respondents view immigration and rural/urban shifts as having influence on employment needs; for the most part, those who indicate an impact see demographic shifts increasing employment needs.

Student Enrollment

By far, student enrollment is seen as having a greater impact on employment needs than any other factor within this group. Almost fifty-eight percent (57.6%) of the respondents believe that student enrollment causes either increases or decreases in employment needs.

Private or Home Schooling

This factor is seen by respondents as having negligible impact on employment needs. Generally, when an effect is noted, it results in a reduction in employment needs. If private schools and home schooling pull students out of the public schools, one expects enrollment to go down which will decrease employment needs. The data generally support this. Cases in which employment needs are increased may be the result of reduced enrollment in the private schools. Students leaving some private schools may be captured by the public schools, increasing enrollment, and consequently, increasing employment needs.

Class Size

Over thirty-one percent (31.4%) of the respondents experience employment needs which are associated with class size; most of these are increased needs. This may imply that there is a general trend toward decreasing class sizes, since decreasing class sizes usually result in increased employment needs. But as stated below, these data invite several interpretations.

Military Mobilization

Only 1 of 380 respondents sees increased employment needs as a result of military demobilization. Another 4.8% experience decreased needs as a result of military demobilization. But, overwhelmingly, 93.9% of the respondents feel that military demobilization has no influence upon their hiring needs.

The data presented in Table 7 are open to considerable interpretation. The results, for the most part, may reflect the current condition within a school district rather than a theoretical impact should a change in one of the factors occur. For example, a "no change" response to State Funding could mean: "There is no change in our state funding."

"There is a change in our state funding, but it doesn't affect our hiring needs."

"We receive no state funding so there is no impact."

For this reason it is prudent to be cautious when drawing cause and effect conclusions about the data presented here.

SOURCES OF NEW HIRES

School administrators responding to the survey state that their greatest source of new hires comes from new education graduates from in-state institutions. Over fifty-five percent (55.4%) of the administrators note in-state graduates comprise 50 to 100% of their new hires. Only 7.2% state they find 0 to 9% of their new hires in the ranks of in-state institution graduates.

Out-of-state institutions provide 0 to 9% of the new hires for 47.8% of the school administrators. Approximately forty-four percent (44.1%) of the administrators find 10 to 50% of their new hires from out-of-state sources. Only 8.1% find out-of-state institutions to be a source of 50 to 100% of their new hires. Breaking this figure down further, graduates from out-of-state institutions provide 75-100% of the new hires for only 1.2% of the school administrators.

School administrators responding to the survey represent school districts from various states in the Mid-Atlantic region. Therefore, it is possible to further delineate the results of the survey to review each state's reported employment of graduates from out-of-state institutions. Delaware, Maryland, New Jersey, Virginia, and West Virginia employ a moderate number of out-of-state candidates while New York and Pennsylvania employ a very limited number of out-of-state teacher candidates. Detailed results of employment of out-of-state new education graduates for each state are shown in Table 8 below.

Table 8

Percent of New Education Graduates from In-State and Out-of-State Institutions

(At the top of the table are the percent of new hires for a school district. In the cells below are the percent of administrators responding. For example, the 10.0% in the cell at the bottom right corner of the table indicates that 10.0% of the West Virginia administrators report that between 75-100% of their new hires come from out-of-state graduates.)

	0-10%		10-24%		25-49%		50-74%		75-100%	
	In-state	Out-of-state	In-state	Out-of-state	In-state	Out-of-state	In-state	Out-of-state	In-state	Out-of-state
DE	0.0%	10.0%	10.0%	10.0%	50.0%	70.0%	30.0%	10.0%	10.0%	0.0%
MD	0.0%	16.7%	5.6%	22.2%	27.8%	50.0%	55.6%	11.1%	11.1%	0.0%
NJ	11.0%	31.9%	15.1%	27.8%	27.4%	29.2%	32.9%	8.3%	13.7%	2.8%
NY	8.5%	60.5%	17.1%	27.4%	22.5%	6.5%	23.3%	4.8%	28.7%	0.8%
PA	3.8%	69.9%	11.5%	26.0%	19.2%	2.7%	39.7%	1.4%	25.6%	0.0%
VA	7.7%	21.1%	7.7%	39.5%	25.6%	26.3%	51.3%	13.2%	7.7%	0.0%
WV	10.0%	50.0%	10.0%	20.0%	10.0%	10.0%	30.0%	10.0%	40.0%	10.0%

Table 9, page 21, shows the distribution of sources of new hires. Almost sixty-seven percent (66.9%) of the administrators responding to the survey report that 0 to 9% of their new hires are previous education graduates with no teaching or substituting experience whereas 31.3% find between 10 and 74% of their new hires have no experience. Only 1.8% of the administrators note that 75 to 100% of their new hires have no teaching or substituting experience. Conversely, 7.2% of those responding to the survey state that teacher candidates with experience comprise 75 to 100% of their new hires; 12% note that 0 to 9% of their new hires have experience; about sixty percent (63.3%) find 10 to 50% of the teacher candidates they employ have experience. Many administrators note that, as a source of teachers, a large number of new hires are individuals with no experience. However, a similarly high number of administrators note that 10 to 50% of their new hires have experience.

Substitute teachers appear to be a good source of new hires. Sixty-four percent (64%) of the school administrators responding to the survey note that they obtain between 10 and 74% of their new hires from the ranks of substitute teachers. Only 7% report that 75 to 100% of their newly hired teachers are substitute teachers.

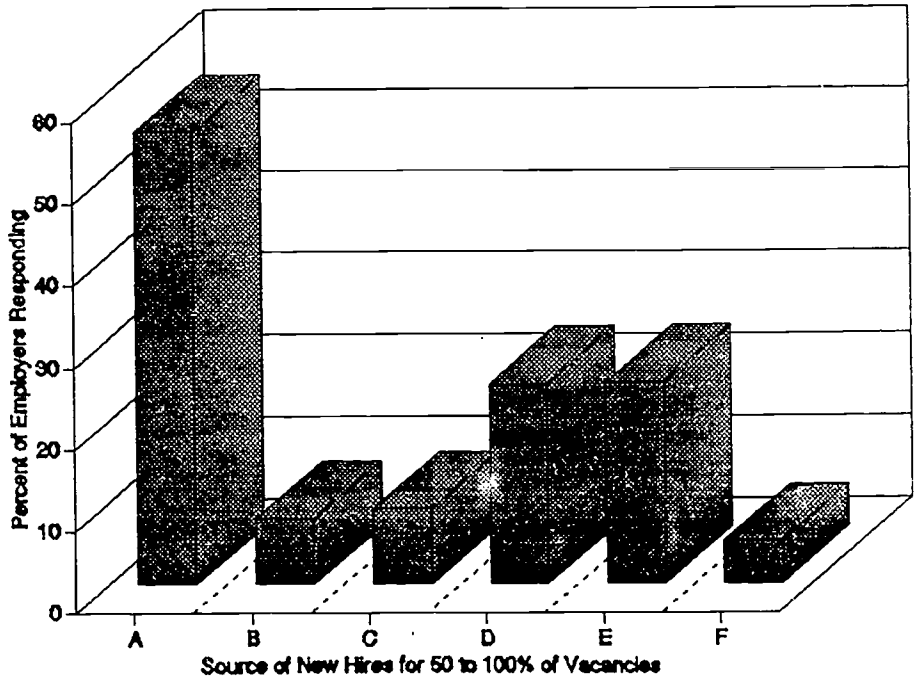
Table 9

Distribution of Sources of New Hires

(At the top of the table are the percent of new hires for a school district. In the cells below are the percent of administrators responding by the sources of new hires. For example, the 21% in the first cell means that 21% of the responding administrators indicate that new education graduates from in-state institutions comprise 75-100% of their new hires.)

Sources of new hires	100-75%	74-50%	49-25%	24-10%	9 -%
New education graduates from in-state institutions	21%	34%	24%	14%	7%
New education graduates from out-of-state institutions	1%	7%	17%	27%	48%
Previous ed. grads without teaching/subbing exp	2%	7%	7%	17%	67%
Substitute teachers	7%	18%	18%	29%	29%
Teachers with experience	7%	18%	32%	31%	12%
Teachers from alternative certificate programs	2%	4%	6%	7%	82%
Other	0%	12%	19%	8%	62%

Figure 7: School systems' sources of new hires



A = New education graduates from in-state institutions
B = New education graduates from out-of-state institutions
C = Previous education graduates without teaching or subbing experience
D = Substitute teachers
E = Teachers with experience
F = Teachers from alternative certificate programs

Alternate certificate programs prove to be a limited source of teacher candidates. This fact is reflected in the high percentage of administrators, 82.2%, reporting that they use the alternate certification program for teacher candidates in 0 to 9% of their employment situations. Only 16.4% indicate that they take somewhere between 10 to 74% of their new hires from this source whereas a very low percentage (1.5%) indicate that they use the alternate certification program as a source for 75 to 100% of their new hires.

Overall, teacher candidates that are new graduates from in-state institutions appear to have a higher potential to obtain employment than candidates from any other source. However, both teacher candidates with previous teaching experience and those that have substitute teaching experience appear to have a greater chance for employment than teacher candidates without experience, out-of-state new education graduates, or teacher candidates coming from alternate certificate programs. See Figure 7 on page 21 for a comparative view of new hire sources.

When school administrators define how they learn of and select qualified candidates for hiring consideration the highest percentage, 37.0% of the administrators respond that their knowledge of candidates comes through print advertising, newspapers and magazines. Almost as many administrators, 35.9%, find unsolicited applications to be a good source. For these administrators, 50 to 100% of their knowledge of candidates comes from these sources. Interestingly 15.7% indicate that they learn of and select 75 to 100% of their candidates through print advertising and unsolicited applications. However, print advertisement is a source of 0 to 9% of the knowledge of candidates for 27% of the administrators. Over eighteen percent (18.2%) report that unsolicited applications provide information about 0 to 9% of their candidates.

The next greatest source of learning of and selecting qualified candidates for consideration is from substitute teacher lists. Over twenty-five percent (25.2%) of the administrators use this source for knowledge of candidates. However, a slightly higher number of administrators (27.2%) note 0 to 9% of their knowledge of candidates come from substitute teacher lists. Thus, these administrators obtain little, if any, information about candidates from this source.

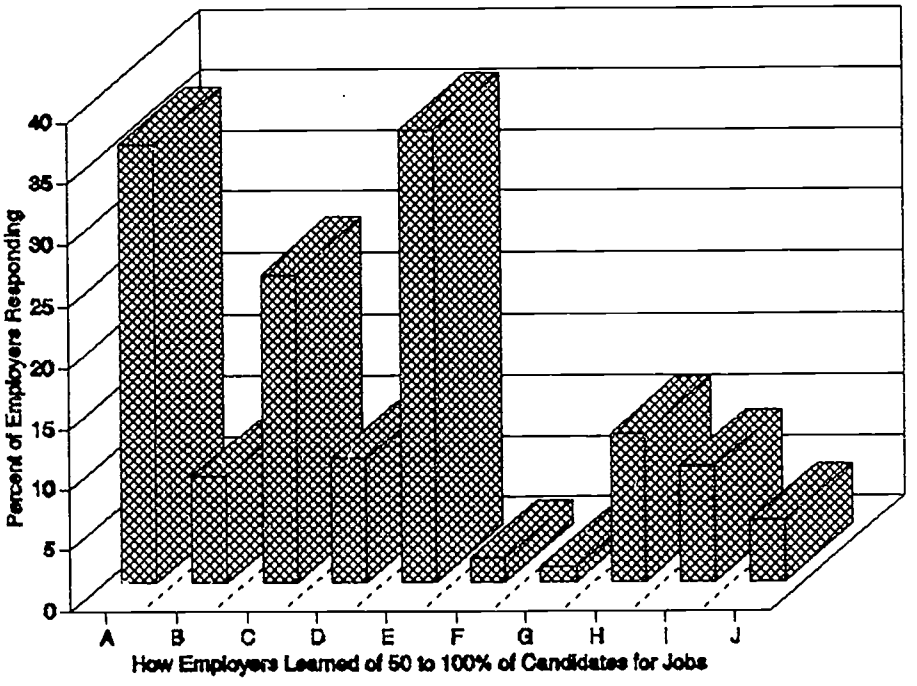
Approximately twelve percent (12.2%) of the administrators indicate that they learn about candidates from other administrators in 50 to 100% of the cases. Yet, a high percentage (43.2%) find this not to be true. This second and much larger percentage of administrators note that 0 to 9% of their knowledge of candidates comes from other school administrators.

On-campus recruitment, job fairs, and networking with college personnel prove to be a moderate source of learning of and selection for consideration of teacher candidates for school administrators. Almost nine percent (8.7%) learn about 50 to 100% of their candidates through on-campus recruitment. Over ten percent (10.2%) learn about 50 to 100% of their candidates through job fairs, and 9.5% learn of the same percentage through college personnel. A much higher number do not learn of candidates through these sources. In the case of on-campus recruitment, 61.6% of the administrators obtain 0 to 9% of their knowledge of candidates through this source. Job fairs do not represent a source in information for 59.3% of the administrators as they note that 0 to 9% of their knowledge of candidates come from this source. Likewise, college personnel provide 0 to 9% of the knowledge about candidates for 54.3% of the administrators.

Recommendations from community members and others provide limited information. Over fifty-eight percent (58.4%) of the school administrators respond that they receive information about 0 to 9% of the candidates from community members. Only 5.0% note this as a source for 50 to 100% of their learning about candidates.

Sources for learning of and selecting qualified candidates for hiring consideration which provide little, if any, information for school administrators are third-party employment agencies and electronic advertising. In both of these cases, over 90% of those responding indicate they use this as a source for 0 to 9% of their knowledge of candidates. In both cases, 1.3% for employment agencies and 2.0% for electronic advertising, a very limited number respond that they obtain 50 to 100% of their knowledge of candidates through these sources. These results are shown in Figure 8 below.

Figure 8: Sources for school administrators to learn of and select qualified candidates for hiring consideration



A = Unsolicited applications
B = On-campus recruitment
C = Substitute list
D = Job Fairs
E = Print advertising (newspapers, magazines)
F = Electronic advertising (radio, TV, Internet)
G = Third-party employment agencies
H = Networking with other school administrators
I = Networking with college personnel
J = Recommendations from community members/others

When eliminating the extremes and reviewing the responses between 10 and 50%, a slightly different perspective is found. Substitute teacher lists (47.6%), unsolicited applications (45.9%), and networking with other school administrators (44.7%) reflect the highest sources of information in this range. Secondly, recommendations of community members and others (36.6%), college personnel (36.3%), job fairs (30.5%), and on campus recruitment (29.7%) can be grouped as another source of knowledge of candidates. Electronic advertising (6.9%) and third-party employment agencies (6.5%) continue to provide very little as a source of information for school administrators. See Table 10 below.

Table 10

Top Sources for Learning of and Selecting Qualified Teachers

For 50-100% of Candidates:

1) Print advertising;
2) Unsolicited applications;
3) Substitute lists.

For 10-49% of Candidates:

1) Substitute lists;
2) Unsolicited applications;
3) Networking with school administrators.

The responses overall indicate that school administrators find printed advertising, newspapers and magazines, and unsolicited applications to be their greatest source of learning of and selecting qualified candidates for hiring consideration. Substitute teacher lists, other school administrators, job fairs, networking with college personnel, and, to a lesser degree, on-campus recruitment provide other, but more limited, sources of knowledge of candidates.

In all cases, electronic print and third-party employment agencies are seen as providing little, if any, information about teacher candidates. Indeed, this source may be used only when school administrators are searching for candidates in high need categories.

School administrators responsible for hiring teachers have a continued interest in gathering information about highly qualified candidates. Some sources prove to be more helpful than others in providing the knowledge needed to identify and select candidates for employment consideration. On the next page, Table 11 presents data in the form of percentages that reflect several different sources of information about qualified teacher candidates for employment consideration.

Table 11

Distribution of Sources of Availability

Sources of qualified candidates for hiring consideration	100-75%	74-50%	49-25%	24-10%	9-0%
Unsolicited applications	16%	20%	25%	21%	18%
On-campus recruitment	2%	7%	14%	16%	62%
Substitute list	8%	17%	21%	26%	27%
Job fairs	4%	7%	11%	19%	59%
Print advertising (newspapers, magazines)	16%	21%	21%	15%	28%
Electronic advertising (radio, TV, Internet)	1%	1%	3%	4%	91%
Third-party employment agencies	1%	.3%	2%	5%	92%
Networking with other school administrators	5%	8%	17%	27%	43%
Networking with college personnel	4%	6%	11%	26%	54%
Recommendations from community members/others	2%	4%	12%	25%	58%
Other	7%	0%	20%	13%	60%

CONCLUSIONS

Those wishing to become a teacher must be aware that employment opportunities are influenced by certification area(s), geographic flexibility, school enrollment and diversity, and personal skills and abilities. Some of the most popular certification areas -- Elementary Education, English, Social Studies, and Health and Physical Education -- have a significant surplus of teachers in the MAASCUS region as Table 5 shows. Even with the predictions of a need for more teachers in the future due to increasing student enrollment and more teacher retirements, new education graduates in these certification areas will likely enter an extremely competitive market for the next several years.

New graduates willing and able to teach in a diverse environment will improve their opportunities for employment. Diverse student populations, however, are not limited to only urban environments. In this study, many administrators list Bilingual Education and English as a Second Language as fields with a shortage of teachers implying that diversity is an influencing factor in a variety of districts. Teachers need not necessarily be certified to teach a second language for that skill to help them in the job market. For example, an elementary teacher fluent in Spanish will be better able to communicate in a school experiencing an increase of Hispanic students.

The market for minority teacher candidates should be favorable since the supply of minority candidates is not increasing. The student population is becoming more diverse, but the teacher population is not. It makes sense for administrators to seek teachers who reflect this growing diversity. Minority teachers may serve as excellent role models for all students, including majority students. And "minority" does not exclusively mean "non-white". A male elementary teacher may be considered a minority in a field where females are the majority; and this male may have more opportunities for employment in this competitive field than female applicants, assuming his teaching skills are competent.

The AASPA list of knowledge and skills (Table 1) is a clear illustration of the challenges of teaching and of the demands placed upon modern educators. The ability of a teacher candidate is a major determining factor not only in that person's chance of getting a job, but also in his/her chances of succeeding in that job.

With more opportunities for employment in urban settings, as the literature review suggests, colleges would find it to their advantage and the advantage of their students to provide more training, field experiences, and student teaching in urban schools. Most education majors are from suburban and rural schools. Without training in an urban environment, they would not serve their students well even if they wish to teach in an urban school. While the results in this survey are not analyzed by the district environment (urban, suburban, rural) and provide no comparison of needs in urban schools to needs in other schools, it still can be concluded that in the overall competitive market which the results do indicate, anything a college can do to help its graduates be better prepared for all teaching opportunities is worth the effort.

Although on the surface it may seem counterproductive to support alternative teacher certification programs, they may help to equalize the diversity imbalance between students and teachers. Colleges could take a leading role in training career changers to become effective teachers. Many of these people have outstanding skills developed from years of experience in other professions, and with research showing that a higher percentage of students enrolled in alternative programs are minority and interested in urban teaching, they may help meet the need for teachers in these environments. While only 6% of the administrators responding in this survey claim to use alternative certification programs as a source of 50 - 100% of their hires, this method of preparing teachers to meet areas of need ought not to be ignored, even if only for the sake of the small percentage of schools using this source. These 6% of administrators may be representing larger districts with many vacancies to fill each year. Unfortunately, the analysis of the data does not go into such depth to answer this conjecture.

With the professional demands of teaching becoming more complex, five-year education programs should help newly certificated teachers to be more effective educators and to adjust better to their first-year jobs. It would be interesting to discover in the future whether candidates completing more years of training fare better than four-year graduates in the job market. While the research seems to indicate that those in five-year programs are more committed to teaching than four-year graduates, it could be because five-year graduates committed more time, money, and effort to the training and want to see such efforts pay off. As school budgets get trimmed (which seems to be a sign of the current political times both at the Federal and state levels), and as supported by Table 7 (which shows 40% of administrators seeing Federal and state funding leading to reduced employment in their districts), some districts may favor first-year bachelor degree teachers over first-year master degree teachers and their higher salaries. Although this issue is not addressed directly by the data, the results in Table 7 imply a warning that economics may play a critical role in teacher hiring despite other evidence supporting the need for more thorough teacher training.

This speculation that tight budgets may dictate hiring decisions places colleges offering five-year master degree programs in a catch-22 position. On the one hand, colleges and those enrolled in these programs are trying to meet the demands of schools and society for better teachers. On the other hand, some school officials may prefer bachelor-degree graduates because of budget constraints. This hypothetical situation again illustrates the perplexities of school staffing.

Those considering education as a career must use caution when interpreting job market statistics through the media. The article in the Spring/Summer 1995 *Managing Your Career* magazine seems to indicate through its headlines and highlighted text that the market for teachers is exceedingly good. Yet the small print in the article indicates some of the same facts highlighted in this report -- employment in many ways depends on certification area(s) and geographic location. A glance at this article misleads a reader about the market; a thorough reading of this and other sources provides a more realistic picture.

Common sense dictates that the more geographically flexible a teacher candidate is, the more opportunities this person will have to find a full-time teaching job. Those who are not able or willing to move will have to explore their local markets to discover the best way to enter the profession. A surplus of teachers may mean the path to full-time employment is through substitute teaching or serving as a teacher's aide. Although serving as a substitute teacher does not insure a full-time job, the administrators in this report hire more substitute teachers than previous graduates without teaching experience. Substitute teaching may also strengthen networking relationships which rank relatively high in the results in Table 10.

While there are no guarantees for employment, an education major who chooses a field or fields in more demand than others fields will increase his/her chances for employment (see Tables 4 and 5). Earning two or more certifications will also increase opportunities for employment. Those who choose to pursue certification in areas with a surplus of teachers should know of the market conditions. This survey shows that all elementary education areas have a considerable surplus of teachers. Schools do hire elementary education teachers since these fields make up more than half of the teaching force, but the competition for each job is intense. With all elementary education fields having a considerable surplus of teachers, there must be a large number of these teachers, many of whom are recent graduates, not having full-time teaching jobs. With such a reserve pool available, it is hard to believe that opportunities for elementary education graduates in the MAASCUS region will improve significantly in the next few years.

It is important, however, that an education major chooses a certification field(s) that is of interest. A person selecting special education who does not have the interest or the personal qualifications to teach in this field is unlikely to stay in education even if he/she finds a job. It may be that elementary education is the best choice for a particular person; this person may be the one to land a job despite intense competition. But this person should know about the market conditions before making a commitment to a certification field(s).

College personnel and faculty who do not acknowledge the challenges of the market for fields with a surplus of teachers are doing a disservice to their students and to the educational community. And the questions must be asked and addressed, "Should there be a limit to the number of graduates prepared in areas with a surplus of teachers? Do teacher preparation programs have an ethical obligation to respond to the shortages and surpluses of the market?" They are not easy questions to answer since there are many influencing factors including the *right* of qualified students to choose the field they *want* to major in regardless of the market.

While concerned about the current job market, those in colleges and schools must be aware of the future as well. Education majors preparing for teaching careers now will not be entering the market for two, three, or four or more years. Research has not been able to accurately forecast teacher hiring needs. With the many demands on teachers and the programs that prepare them, implementing a new teacher education track or revising an existing one does not take place rapidly. There may be a need for Russian and Japanese teachers as Tables 4 and 5 show, but how many colleges employ professors qualified to prepare these teachers? If a college invests the time, effort, and money to design a new program which meets state certification standards, will there be enough education majors interested to enter the program to warrant the cost? Will the market still need these teachers? The actual number of Russian and Japanese teachers needed is probably rather low. How many colleges should try and develop programs?

The previous speculation that tight budgets may impact school hiring also comes into consideration here. Many colleges preparing elementary education teachers rely on this major to attract students and tuition dollars to their campuses. What college will want to eliminate or significantly trim a popular major and risk investing limited financial resources to develop programs which may attract a small number of students? The figures from the Bureau of Labor Statistics in Tables 2 and 3 show a projected increase in elementary teachers needed by 2005 and an aging of the current elementary education teaching staff. The alarms of an impending teacher shortage sounded in the late 1980s and the early 1990s proved false. Even with the reserve pool of teachers, which is very difficult to

measure, maybe the numbers this time are pointing to a shortage of teachers within 10 years or at least some improvement in the job market in certain certification fields.

While the questions are complex and difficult to answer, perhaps the first step to meeting the staffing demands of this profession is for the employers of teachers and the preparers of teachers to make a genuine effort to understand each other better. This study does not examine cooperative ventures between schools and colleges, but with the results reported here, it certainly can be concluded that such efforts are needed. At the very least, the information in this report should be shared with education majors so they may make informed decisions about pursuing a career in teaching.

It is clear from this survey that the current market in the MAASCUS region in many fields has a surplus of teachers. That many administrators learn of qualified candidates through unsolicited applications is another indication of a surplus of teachers. Schools do not have to recruit teachers except in limited, high need fields. For most administrators responding, third-party employment agencies serve an extremely limited role in teacher staffing, also implying a surplus of candidates in the market.

There is some good news for new education graduates. MAASCUS region employers indicate that they hire a higher percentage of new education graduates (especially from in-state institutions) than they hire teachers with experience.

What is not clear is whether the overall teachers' job market will improve significantly in the next several years to give hope to education students that there are better times ahead. Projecting the current MAASCUS market into the future casts a dark shadow on the chances of those pursuing certifications in many popular areas of finding a job once they graduate. Yet, some of the projections in the literature review point to more teaching jobs in the next 10 years. Such mixed messages make the decisions of whether to choose teaching as a career and what certification field to study difficult ones for current and future education majors.

REFERENCES

American Association of School Personnel Administrators Report (1995). *Most Critical Knowledge and Skills of a Future Educator.* Sacramento, CA.

America's Teachers Ten Years After "A Nation at Risk" (NCES 95-766). U.S. Department of Education. National Center for Education Statistics. (1995). Washington, D.C.

Arnold, C.L. & S.A. Bobbitt (1993). *Selected Tables on Teacher Supply and Demand: 1987-88 and 1988-89* (NCES 93-141). U.S. Department of Education, National Center for Education Statistics. Washington, D.C.

Association for School, College and University Staffing (1995). *Teacher Supply and Demand in the United States, 1994 Report.* Evanston, IL.

Baker, T.E. & M.D. Andrew (1993). *An Eleven Institution Study of Four-Year and Five-Year Teacher Education Program Graduates.* Paper presented at the annual meeting of the Association of Teacher Educators, Los Angeles, CA.

Blank, R. (1994). *SASS by State, 1990-91 Schools and Staffing Survey: Selected State Results.* U.S. Department of Education, National Center for Education Statistics. Washington, D.C.

Bobbitt, S.A., M.C. Leich, S.D. Whitener & H.F. Lynch (1994). *Characteristics of Stayers, Movers, and Leavers: Results from the Teacher Followup Survey: 1991-92* (NCES 94-337). U.S. Department of Education, National Center for Education Statistics. Washington, D.C.

Boyd, W.L. & J.A. Raffel (1990). "Urban Education Today," *Journal of Planning Literature*, 5(1), 22-28.

Braun, J.A., K. Green, A. Willems & M. Brown (1990). "Getting a Job: Perceptions of Successful Applicants for Teaching Positions," *Action in Teacher Education*, 12(2), 44-54.

Choy, S.P. (1993). *America's Teachers: Profile of a Profession*. U.S. Department of Education, National Center for Education Statistics. Washington, D.C.

Connors, W.R. (1993). *Teacher Shortages and Surpluses in New York State: Perceptions of Teaching Candidates and Administrators*. State University College of Arts and Sciences, Plattsburgh, NY.

Feistritzer, C.E. (1993). "National Overview of Alternative Teacher Certification," *Education and Urban Society*, 26(1), 18-28.

Gilbert, S.L. (1995), "Perspectives of Rural Teachers Toward Teaching in Urban Schools," *Urban Education*, 30(3), 290-305.

Grissmer, D.G. & S.N. Kirby. (1991). *Patterns of Attrition Among Indiana Teachers* (Report No. R-4076-LE). RAND. Santa Monica, CA.

Herbster, D.L., F.J. Abel, D. Bell & E. Sparapani (1991). *A Flawless Method for First Year Teacher Employment*. Paper presented at the annual meeting of the Association of Teacher Educators, New Orleans, LA.

Keating, P. (1995). "Careers in Education," *Community Jobs, The National Employment Newspaper for the Non-Profit Sector*, May 1995, p. 1,4-5.

Maryland State Department of Education (1994). *Teacher Supply and Demand in Maryland 1994-1996*. Baltimore, MD.

New York State Department of Education (1992). *Projections of Public School Classroom Teachers: New York State 1992-93 to 1996-97*. Albany, NY.

Oregon Department of Education (1992). *1992 Educator Reserve Pool Study*. Eugene, OR.

Pallas, A.M., G. Natriello & E.L. McDill (1989). "The Changing Nature of the Disadvantaged Population Current Dimensions and Future Trends," *Educational Researcher*, 18(5), 16-22.

Snyder, J.F., A.S. Doerr, & M A. Pastor (1995). *Perceptions of Preservice Teachers: The Job Market, Why Teaching, and Alternatives to Teaching*. Slippery Rock University, Slippery Rock, PA.

Strauss, R.P. (1993). *Who Should Teach in Pennsylvania's Public Schools?* Carnegie-Mellon University, Pittsburgh, PA.

Thompson, G. (1995). "Teaching Boom: A Surprising Solution to the Career Puzzle," *Managing Your Career*, Spring/Summer 1995, p. 10-11.

Zimpher, N.L. (1989). "The RATE Project: A Profile of Teacher Education Students," *Journal of Teacher Education*, 40(6), 27-30.