ABSTRACT
                This paper summarizes key findings from three 2002 documents
on availability of special education professionals: "The Supply and Demand of
Special Education Teachers: The Nature of the Chronic Shortage of Special
Education Teachers" (J. McLeskey and others); "Special Education Teacher
Retention and Attrition" (B. Billingsley); and "The Proliferation of
Alternative Routes to Certification in Special Education: A Critical Review
of the Literature" (M. Rosenberg and P. Sindelar). The paper addresses the
following topics: magnitude of the special education teacher shortage;
factors influencing demand; factors influencing supply; reasons for low
teacher supply; attrition and retention; filling teacher vacancies and
reducing demand; and future research directions. Three policy recommendations
for state and local education agencies emerged from analysis of these
documents: (1) focus on strategies for supporting new special education
teachers (e.g., mentoring, administrative support) in addition to recruitment
strategies; (2) examine teacher roles, responsibilities and caseloads to
ensure that educators have adequate time to focus on student and family
needs; and (3) collaborate with institutions of higher education in
developing and implementing alternative certification programs. (Contains 44
references.) (DB)

Supply and Demand of Special Education Professionals
Project Forum Synthesis Brief

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Synthesis Brief

Supply and Demand of Special Education Professionals

Synthesized by Eve Müller and Joy Markowitz   Project FORUM at NASDSE   April 2003

Purpose

The purpose of this synthesis brief is to summarize key findings from two documents produced by the Center on Personnel Studies in Special Education (COPSSE) relating to the availability of special education professionals: "The Supply and Demand of Special Education Teachers: The Nature of the Chronic Shortage of Special Education Teachers" (McLeskey, Smith, Tyler & Saunders, 2002) and "Special Education Teacher Retention and Attrition" (Billingsley, 2002); and a third document produced by the National Clearinghouse for Professions in Special Education, "The Proliferation of Alternative Routes to Certification in Special Education: A Critical Review of the Literature (Rosenberg & Sindelar, 2002). All three documents can be found at the COPSSE website, www.copsse.org.

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Magnitude of the Special Education Teacher Shortage

Data available from professional organizations and research literature indicate that there is a severe and chronic shortage of special education teachers in the United States and that the problem will only get worse. During the 1998-1999 school year, approximately 10 percent of individuals filling special education teaching positions were not fully certified. This shortage of certified special education teachers has existed for at least the last ten years. Trends suggest that the need for new teachers will continue to grow at a rapid pace over the next ten years and will likely increase the teacher shortage. [Related references: Carlson, Schroll & Klein, 2001; ERIC, 2001; Kozleski, Mainzer, Deshler, Coleman & Rodriguez-Walling, 2000; U.S. Department of Education (USDOE), 2001][1]

Shortages by Location

Although not reported in every state, the shortage of special education teachers is widespread. For example, 98 percent of the nation's school districts report special education teacher shortages, and special education is the area of greatest shortage in the largest 200 cities. [Related references: American Federation of Teachers, 1999; Fideler, Foster & Schwartz, 2000]

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[1] Bracketed references at the end of each section provide sources of additional information on the topic discussed.

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Shortages by Job Description

Teacher shortages are most severe in the area of emotional and behavioral disorders, followed closely by learning disabilities, multiple disabilities and mental retardation. [Related references: American Association of Employment in Education, 1999]

Shortages of Diverse Personnel

There is a severe shortage of culturally and linguistically diverse (CLD) teachers in the workforce. According to several studies this shortage is also likely to grow. [Related references: Fenwick, 2001; Olson, 2000]

Factors Influencing Demand

Student Enrollment

The number of students with disabilities continues to grow at a rate almost three times greater than the overall student population. This level of growth will result in the need for approximately 80,000 new special education teachers by 2010. [Related references: Russ, Chiang, Rylance & Bongers 2001; USDOE, 2000]

Teacher Attrition

Departure of special educators from the teaching profession is a contributing factor to teacher demand. Data show that special education teachers are more likely than general educators to leave the profession entirely. And the attrition *rate* of special educators transferring to general education is more than 10 times greater than that of general educators transferring to special education. Out of 269,243 special education teachers nationwide, the annual *net loss* to general education is just over 5,000. [Related references: Boe, Bobbit, Cook & Barkanic, 1998; Ingersoll, 2001]

Teacher Caseload

Although the two factors above are increasing the need for special education teachers, changes in caseloads may decrease the need for special education teachers in some regions of the United States. This is due to the fact that in some parts of the country, special education caseloads are increasing—even while general education class sizes are being reduced. A recent study found that the average caseload for special education teachers was 17:1, and that waivers to exceed caseload limits were commonplace. Data suggest that caseloads for special education teachers may be increasing to very near the 18:1 ratios of primary general education classrooms in many states. [Related references: Carlson et al., 2001; USDOE, 2000]

Factors Influencing Supply

Traditional Teacher Certification Programs

Traditional teacher education programs (i.e., four to five year, university-based programs) are a major source of new special education teachers. The growing need for new special education teachers, however, continues to outpace the number

of graduates being produced. The limited number of graduates of teacher preparation programs is a significant contributing factor to the shortages of fully certified teachers in special education. [Related references: Boe, Cook, Bobbitt & Terhanian, 1998; Boe, Cook, Paulsen, Barkanic & Leow, 1999; Miller, Brownell & Smith, 1999; USDOE, 1998]

Reserve Pool

The reserve pool is made up of teachers who are certified but not currently working in the profession. Fifteen years ago, two-thirds of all new hires in special education came from the reserve pool, but a more recent study showed that only one-third of new hires now come from the reserve pool. Due to a number of causes (e.g., the fact that educators within the reserve pool have already returned to teaching or have permanently left the field), the percentage of new hires who were members of the reserve pool continues to shrink. [Related references: Boe, Cook, Kaufman, & Danielson; 1996; USDOE, 1998]

Alternative Teacher Preparation Programs

A small but growing source of certified special education teachers is alternative teacher certification programs. These programs offer an alternative to traditional teacher education programs and are described in more detail later in this document. One particularly encouraging feature of alternative certification programs is their success in recruiting teachers from diverse backgrounds. Some reports estimate that culturally and linguistically diverse teachers represent up to 40 percent of those alternatively certified. More than 150,000 teachers have been certified through alternative programs over the past 20 years; however, it is unclear how many may have been certified in special education. The rapid growth in alternative certification programs suggests that more teachers will be produced via this route. [Related references: Feisritzer, 2001; Shen, 1998]

Uncertified Teachers

Approximately 10 percent of all special education teachers are less than fully certified, and new special education teachers are almost twice as likely to be uncertified as new general education teachers. [Related references: USDOE, 2001; Boe, Cook, et al., 1998]

Reasons for Low Teacher Supply

▪ Approximately 40 percent of graduates of special education teacher preparation programs do not enter teaching in the year following graduation. [Related reference: Boe, Cook et al., 1999]

▪ Approximately 35 percent of all graduates of special education programs are already teaching when they complete their teacher preparation programs. [Related reference: Boe, Cook, et al., 1999]

▪ As mentioned earlier, inadequate numbers of special education teachers are being prepared by colleges and

universities. [Related references: Boe, Cook, et al., 1998; Boe, Cook, et al., 1999; Miller et al., 1999; USDOE, 1998]

- Relative to the number of teaching positions available, fewer prospective teachers choose to enter special education teacher preparation programs than elementary teacher preparation programs. Data indicate twice as many prospective teachers enter elementary programs per available teaching position as those who enter special education programs. [Related reference: Boe, Cook et al., 1999]

Attrition and Retention

Teacher attrition is a major factor in the special education teacher shortage. Four of the most powerful predictors of special education teacher attrition are age and experience, certification, school climate and administrative support.

Age and Experience

Young inexperienced teachers are a significant attrition risk. These teachers leave at nearly twice the rate of their more experienced counterparts. [Related references: Boe, Bobbitt, Cook, Whitener, et al., 1997; Miller et al., 1999]

Certification

Higher levels of turnover appear to be associated with lack of certification. [Related references: Boe, Bobbitt, et al., 1997; Miller et al., 1999]

School Climate

Teachers who rate school climate positively are more likely to stay than those who have less positive views of school climate. School climate is measured by a scale that includes a range of items such as availability of materials and cooperation among staff. [Related references: Miller et al., 1999, Zepeda & Ponticella, 1997]

Administrative Support

Perceived support from administrators is significantly related to attrition. Emotional support (e.g., showing appreciation, taking an interest in teacher work, maintaining open communication) is perceived as most important to special educators. However, instructional support (e.g., ensuring adequate time for teaching and non-teaching duties; providing needed materials, space and resources) also has an impact on job satisfaction and level of commitment. [Related references: George, George, Gersten & Grosenic, 1995; Westling & Whitten, 1996]

Other less powerful predictors of attrition are discussed below and relate to teacher qualifications, work environment and affective responses to work.

Academic Ability

Special educators who score higher on standardized tests are twice as likely to leave the profession as those with lower

scores. [Related references: Frank & Keith, 1984; Singer, 1993]

Salary

Special educators with higher paying jobs are more likely to stay than those with lower-paying jobs. [Related references: Boe, Bobbitt, et al., 1997; Miller et al., 1999]

Collegial Support

Findings on the relationship between collegial support and attrition are mixed. Studies suggest, however, that principals can enhance teacher commitment through fostering a collegial environment. [Related references: Billingsley, Pyecha, Smith-Davis, Murray & Hendricks, 1995; Miller et al., 1999]

Induction and Mentoring for New Teachers

Beginning special educators face particular challenges and mentoring appears to have a significant impact on their plans to remain in special education. [Related reference: Whitaker, 2000]

Professional Development

Studies suggest that the more opportunities there are for professional growth, the less likely special education teachers will leave their jobs. [Related references: Brownell, Smith, McNeils & Lenk, 1994; Gersten, Keating, Yovanoff & Harniss, 2001]

Teacher Roles

Several studies have documented concerns experienced by beginning educators, such as: making accommodations for instruction and testing; developing and monitoring IEPs; and collaborating with teachers, paraprofessionals, parents and related services personnel. Role overload has been strongly linked to special education attrition. For instance, teachers who plan to leave special education "as soon as possible" are significantly more likely to rate their workload as "not at all manageable." Job design factors such as lack of time and resources, and excessive meeting responsibilities also contribute to teacher attrition. Furthermore, paperwork is a major contributor to role overload, and recent studies consistently identify paperwork as a problem that contributes to attrition. Finally, a study of teacher burnout found that teachers who work primarily in general education classrooms (i.e., inclusive programs) are at more risk of burnout than teachers who work in more traditional settings (e.g. resource rooms or self-contained classrooms). [Related references: Boyer & Gillespie, 2000; Carlson & Billingsley, 2001; George et al., 1995; Morvant, Gersten, Gillman, Keating & Blake, 1995; Westling & Whitten, 1996]

Student and Caseload Issues

Special educators in secondary schools are at greater risk for attrition than their colleagues in elementary schools, and teachers who teach certain groups are more likely to leave. For instance, teachers working with students who have speech, hearing or vision impairments are most likely to leave,

followed by those working with students with emotional problems. A number of studies have shown that teachers consistently give caseload issues as reasons for leaving (e.g., number of students and diversity of caseloads). Finally, researchers link a range of student-related problems to attrition, including discipline problems, student attitudes, lack of student progress and safety issues. [Related references: Billingsley et al., 1995; Morvant et al., 1995; Singer, 1993]

Stress

Researchers have been looking at the relationship between stress and burnout among special educators for more than two decades. High stress is one of the most powerful predictors of attrition. [Related references: Morvant et al., 1995; Zabel & Zabel, 2001]

Job Satisfaction

Findings suggest that increasing teachers' job satisfaction is one of the most important ways to reduce attrition. A variety of work conditions noted previously influence job satisfaction, including relationships between teachers and principals, stress level, clarity of roles and availability of professional support. [Related references: Gersten et al., 2001; Whitaker, 2000]

Commitment

Several studies suggest that teachers with higher levels of professional and organizational commitment are more likely to

remain in the field. [Related references: Miller et al., 1999; Gersten et al., 2001]

Filling Teacher Vacancies and Reducing Demand

As teacher shortages have increased across the nation and filling teacher vacancies has become more and more challenging, administrators from state departments of education, school districts and other education agencies have implemented a variety of strategies directed at resolving the problem. Some of these strategies are based on proven practices and others are more experimental in nature.

Rationale for Hiring Certified Teachers

Research findings on the relationship between teacher qualifications and students' academic outcomes support the notion that certified teachers are more effective than teachers without credentials or with inadequate preparation. Evidence suggests preparation in both subject matter and instructional methodology is linked to student achievement, at least in general education. Unfortunately, data about the preparation of special education teachers and the outcomes of students with disabilities are not yet available. [Related references: Wenglinsky, 2000; Wilson, Floden & Ferrini-Mundy, 2001]

Strategies for Reducing Teacher Shortages

Despite research findings clearly indicating that attrition is the most significant factor contributing to the lack of special

education teachers, states and school districts are focusing predominantly on recruiting new and qualified teachers.

States and districts throughout the nation are using a variety of incentives to encourage individuals to become educators, accept positions in particular localities and remain in teaching positions. The following are examples of incentives currently being used although there is little data as of yet supporting the effectiveness of these strategies:

- competitive salaries;
- signing bonuses;
- student loan forgiveness;
- reimbursement for relocation expenses;
- teacher induction programs;
- mentoring programs;
- ongoing professional development;
- school funding equity across states' poor and wealthy districts;
- scholarships to attend teacher education programs; and
- outreach activities at the high school level designed to develop interest in teaching as a career.
[Related reference: National Teacher Recruitment Clearinghouse, 2001]

Alternative Routes to Certification

Alternative routes to certification (ARC) are rapidly becoming one of the main ways in which new teachers are prepared. Forty-one states plus the District of Columbia have more than

117 alternative programs available for degreed individuals who want a license to teach. [Related reference: Feisritzer, 1998][2]

ARC Defined

Defining the critical features of ARC is difficult because programs instituted by states, local education agencies (LEAs) and institutes of higher education (IHEs) vary greatly. Also, the term ARC has multiple meanings and has been used to refer to a number of avenues to teaching ranging from emergency certification survival training to sophisticated high-tech programs for individuals with unique life experiences. These programs all prepare teachers in nontraditional ways and allow individuals without traditional undergraduate teacher preparation entry to the education profession.

ARC programs also differ from traditional programs in terms of:

- length and structure of programs (ARC programs are usually shorter and field-based activities may replace traditional coursework in pedagogy);

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[2] ARC programs have continued to proliferate since the synthesized documents were published. In 2003, 46 states and the District of Columbia report having a total of 144 routes other than the traditional approved college teacher education program route for certifying teachers. The remaining four states report they are considering or have proposed alternative routes. (Retrieved on April 30, 2003 from: http://www.ncei.com/2003/executive_summary.htm.)

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- delivery mode (direct instruction may be supplemented with clinical experiences and local master teacher mentorship; distance technologies may provide access to instruction in remote areas, etc.); and

- candidate population (ARC programs attract proportionally more males and appear to be successful in recruiting individuals from multicultural backgrounds to work in urban environments). [Related references: Feisritzer, 1998; Hawley, 1992]

Characteristics of Effective ARC Programs

Effective ARC programs appear to have a number of common characteristics. Successful ARC programs are planned and delivered collaboratively by consortia of IHEs and LEAs, often with specific waivers from state education agencies (SEAs). There is evidence that programs are most effective when their content is substantive, rigorous and truly programmatic. Although research to support this assertion is limited, the research that does exist is unequivocal. To meet the needs of nontraditional students, it is also necessary for programs to deliver content through a number of learning activities and in a number of alternative formats. In addition, a number of studies found that IHE supervision and on-site coaching and mentoring are critical for the development of effective ARC teachers. [Related reference: Burstein & Sears, 1998]

Areas of Concern

A number of concerns about ARC have been raised. First, there is still no adequate definition of ARC that captures the diversity of program types. This is a concern because the term is used for very different programs—it's the problem of comparing apples and oranges. Second, a lack of research on program outcomes makes it hard to measure the effectiveness of ARC programs. Third, ARC programs lack explicit professional standards for program development, candidate recruitment and program completion. In fact, teacher educators continue to struggle with having different standards for ARC and traditional candidates. Data suggest that graduates of ARC programs are somewhat less academically qualified than graduates of traditional teacher education programs and that graduates of ARC programs tend to stay in teaching for fewer years than traditionally trained special education teachers. Limited research data show that graduates from some ARC programs are very competent beginning teachers. [Related references: Banks & Necco, 1987; Sindelar & Marks, 1993]

Future Research Directions

The three papers synthesized in this document recommend additional research addressing the following questions related to special education professionals:

- How do we attract more teachers into special education?
- How do we attract more culturally and linguistically diverse individuals into special education?

- Why do so many teachers transfer from special to general education?
- What is the impact of recruitment strategies that are currently being used by states and local education agencies to fill teaching positions?
- What strategies are effective in retaining well-qualified teachers?
- What is the relationship between caseload/class size and teacher retention?
- What in particular contributes to role overload for special education teachers?
- How can teachers' roles be restructured to allow more time for student-centered tasks?
- What are the features of effective ARC programs?

Concluding Remarks

Although much research is still needed in this area, several policy recommendations for state and local education agencies emerged from the synthesized documents:

- Focus on strategies for supporting new special education teachers (e.g., mentoring, administrative support, etc.) in addition to recruitment strategies.
- Examine teacher roles, responsibilities and caseloads to ensure that educators have adequate time to focus on student and family needs.
- Collaborate with IHEs in developing and implementing alternative certification programs.

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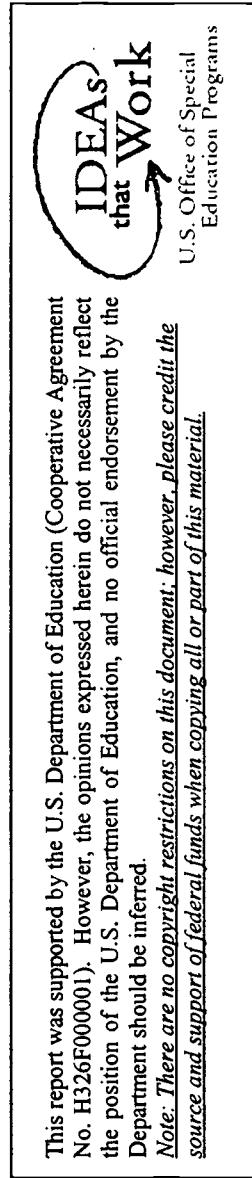
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