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ABSTRACT

This report discusses the outcomes of a study that reviewed various teacher supply and demand studies to investigate the impact of survey designs on special education personnel preparation and to formulate an agenda of advocacy for the future design of surveys. Results from the study of two national surveys, three state surveys, two association surveys, and two national projection publications indicate: (1) national comprehensive longitudinal studies do not report desegregated data for special educators even when respondents have been able to identify themselves as having teaching assignments related to students with disabilities; (2) national studies collecting information from teachers are inconsistent in their listings of related services professionals and collection of data; (3) special education caseloads vary across disabilities and service delivery models, affecting projections; (4) perceptions do not carry the weight of numerical data and reduce the credibility of results; (5) variations in state licensure fields mirror trends in special education and defy uniform collection of data by disability served or teacher licensure; and (6) national comprehensive longitudinal surveys do not include questions that address fully the interests or needs of special education around legal burdens, paperwork, the broad range of instructional needs, and overlapping professional roles. Recommendations are included. (CR)

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Establishing the Supply and Demand for Special Educators

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Ninety eight percent of school districts in the nation currently report a chronic shortage of special education teachers. Despite this, national surveys that provide information on the supply and demand for teachers often fail to include questions that would provide insight into the reasons for this continuing phenomenon in special education or pertinent data on special education-specific areas of need. The field of special education is left, then, to undertake redundant research at additional costs in money and effort to understand the dynamics of its own personnel.

At its June 2000 meeting, the Advisory Committee to the National Clearinghouse for Professions in Special Education (NCPSE) engaged in a review of various supply and demand studies. It undertook that review to consider the impact of the survey designs on special education personnel preparation and to formulate as a group an agenda of advocacy for the future design of national, state, and education association surveys. The committee reasoned that, if the collection of teacher supply and demand data could include questions relative to the supply and demand issues in the special education workforce, redundant research could be reduced.

Studies of supply and demand are conducted at the national level with DOE funding, and States conduct state-specific studies with language that is germane to their particular State. National education associations collect data through questionnaires crafted to meet their unique needs. Long-range projections for the number of teachers that will be needed are published by the DOE's National Center for Education Statistics.

The studies that were reviewed by the Advisory Committee included the *Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act*, two national federally funded surveys, three State surveys, two national association surveys, and two national projections publications. The committee reviewed the studies and their published analyses with eight questions in mind:

1. What is the purpose of the survey/study?
2. What population was surveyed?
3. What is the scope of the survey? (State, national, profession specific, etc.)
4. How does the survey differentiate special education teachers from general

education teachers?

5. How does the survey address the diversity of job practices and student populations in special education?
6. When teaching categories are included in the survey, are they consistent with those included in IDEA? (autism, deaf-blindness, deafness, emotional disturbance, hearing impairment, mental retardation, multiple disability, orthopedic impairment, other health impairment, specific learning disability, speech or language impairment, traumatic brain injury, and visual impairment including blindness)
7. How does the survey address/include related services professions, e.g., physical therapist, occupational therapist, speech and language therapist, school counselor, school psychologist, school social worker, educational interpreter, art therapist, music therapist?
8. Is the information that is collected from special education teachers disaggregated in the analysis of data?

Advisory Committee subgroups reviewed assigned surveys prior to the meeting and then collaborated onsite to determine the answers. The answers were collected on a template, and conclusions and recommendations were derived after reviewing the collective answers. The Advisory Committee's observations during the review provided the foundation for the agenda of advocacy that was subsequently developed.

Surveys Reviewed and Observations

1) Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act (IDEA)

The U.S. Department of Education's (DOE) Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act (Annual Report) now has 21 editions. Each edition reports on the special education and related services workforce with data supplied by the States each year. These data account for funded teaching positions that are 1) vacant, 2) occupied by fully certified professionals, and 3) occupied by persons not certified to teach. Combining the number of vacant positions and the number of positions filled by persons not certified to teach provides the field with longitudinal data on the demand for qualified teachers to fill authorized positions for children and youth ages 3 - 21. The number of retained teachers who are certified or not fully certified is included also.

Beginning in 1993-94, as a result of the 1992 Amendments to IDEA, States were allowed to report on the number of special education teachers employed and retained either by State specialization categories or by Federal disability categories. In the first years after the change, many States continued to report by Federal disability categories, as had been required initially. As time passed, however, more and more States chose to use specialization categories that were unique to themselves, although these specialization categories were not necessarily comparable across all States. By the 1996-97 data collection, there was so much variation in reporting that data aggregated by Federal disability categories could no longer be considered as

reliable. Therefore, beginning with the 21st Annual Report, teacher data were reported without reference to teaching assignment, i.e., the disability of students being served.

In addition to teacher data, the Annual Report includes comparable employment data on the following positions:

- school social workers
- occupational therapists
- recreation and therapeutic recreation specialists
- teacher aides
- physical education teachers (not necessarily defined as adaptive physical educators)
- supervisors and administrators
- other professional staff
- psychologists
- diagnostic and evaluation staff
- audiologist
- work-study coordinators
- vocational education teachers
- counselors
- rehabilitation counselors
- interpreters
- speech pathologists.

2) Federally Funded Surveys

■ *Schools and Staffing Survey (SASS)*

The SASS is a comprehensive survey of American public and private K-12 schools conducted by DOE's National Center for Education Statistics. It provides data on approximately 14,000 schools, their associated districts, the principals who head those schools, and a sample of approximately 75,000 teachers who work in them. Its primary purposes are to monitor teacher supply and demand conditions, characteristics and qualifications of teachers and principals, and basic conditions in schools. Along these dimensions, SASS provides trend data over time. The SASS was first conducted in 1987-88. Followup surveys have been done in 1990-91, 1993-94 and 1999-2000. For purposes of its review, the Clearinghouse Advisory Committee used the following components of the SASS:

- Teacher Demand and Shortage Questionnaire for Public School Districts (LEAs): Schools and Staffing Survey 1993-94 School Year
- Public School Teacher Questionnaire: Schools and Staffing Survey 1993-94 School Year
- School District Questionnaire: Schools and Staffing Survey 1999-2000 School Year [replaces the 1993-94 document titled Teacher Demand and Shortage

Questionnaire]

- Public School Teacher Questionnaire: Schools and Staffing Survey 1999-2000
School Year

The Schools and Staffing Survey: Recommendations for the Future (Report)

Summary of observations:

The SASS 1999-2000 Public School Teacher Questionnaire collects data on the responding teacher's main assignment in the school, the major/minor field of study, and the current teaching assignment. Special education is not differentiated within the main assignment section. However, fifteen fields of special education are available to identify the major/minor fields of preparation to teach; and the same fifteen are available to identify the current teaching assignment. These fifteen fields are generally consistent with the thirteen categories of disability as listed in IDEA 97, but Special education, general and Other special education are choices in the list as well. This most recent version of the SASS has added autism, developmentally delayed, early childhood special education, and traumatically brain injured to the list of major/minor fields of preparation and current teaching assignments. The word handicapped has been changed to disabled. Mildly or moderately disabled has replaced mildly handicapped, and severely or profoundly disabled has replaced severely handicapped. The respondent has the opportunity to indicate a main activity during the previous school year, but there is no option for noting a move from a special education teaching assignment to a general education teaching assignment at either the elementary or secondary level.

Within the SASS subject matter codes, i.e., what subjects were taught during a recent full week of teaching, no special education subjects, e.g., activities of daily living or community based instruction, or modified special education curricula are listed. The special education respondent would select Other Courses not Elsewhere Classified. There is a comment section if the respondent wants to explain selection of the item.

Within categories that describe the organization of the respondent's classes, the special educator who works in the classroom as a collaborative or inclusion teacher, i.e., instructing students with disabilities in the general education classroom but not necessarily team teaching, does not have a logical option to choose. This exists in both the 1993-94 and 1999-2000 versions.

The SASS does not collect data through the Teacher Questionnaire on school psychologists, school social workers, school counselors, or speech and language therapists or pathologists. The 1999-2000 Public School Questionnaire (not reviewed by the Advisory Committee) does ask the respondent to include the number of school counselors, speech therapists or pathologists, psychologists, and social workers, among others, and the number in each category that are full-time or part-time

The two school district questionnaires (School District Questionnaire and Teacher Demand and Shortage Questionnaire) include special education in their lists of critical shortage areas. Both ask if incentives were offered to recruit teachers to any of those specific areas. Other questions about district practices regarding teachers do not differentiate special education teachers.

Analyses of data from the SASS 1993-94 questionnaires did not disaggregate special education teaching assignments. Collection of the 1999-2000 SASS data is complete. The first data release from those questionnaires is anticipated in May 2001.

■ *Baccalaureate and Beyond Longitudinal Study (B&B)*

The B&B is conducted by the DOE's National Center for Education Statistics. It tracks the experiences of a cohort of college graduates who received their baccalaureate degree during the 1992-93 academic year. This group's experiences in the areas of academic enrollments, degree completions, employment, public service, and other adult decisions will be followed for about 12 years, in a series of four follow-up interviews. Two of those follow-up interviews have been completed. The first follow-up interviews with 12,478 cases took place in 1994, one year after those in the cohort received their bachelor's degrees. The second follow-up interviews with a reduced sample of 10,093 cases collected data in 1997, four years after graduation.

The B&B study provides data to address issues in four major areas of education policy: patterns of preparation for and engagement in teaching; outcomes of postsecondary attainment; access to graduate and professional schools; and rates of return on investment in a bachelor's degree.

For purposes of its review, the Clearinghouse Advisory Committee read selected sections of the methodological design of the second follow-up and analyses of the data from the first and second follow-ups.

- Baccalaureate and Beyond Longitudinal Study: 1993/97 Second Follow-up Methodology Report [Appendices B - F and Teaching section]
- Out of the Lecture Hall and Into the Classroom: 1992-93 College Graduates and Elementary/Secondary School Teaching
- Progress Through the Teacher Pipeline: 1992-93 College Graduates and Elementary/Secondary School Teaching as of 1997

Summary of Observations:

Within the 1997 second follow-up of the B&B, respondents identified fields of teaching in which they were certified at the time of the interview. There are eleven special education fields including:

- deaf and hard-of-hearing

- emotionally disturbed
- mentally retarded
- mildly handicapped
- orthopedically handicapped
- severely handicapped
- specific learning disabilities
- speech/language impaired
- visually handicapped
- general special education
- other special education.

Related services professions were not choices.

In the 1997 second follow-up, itinerant teacher and "support" teacher, i.e., one who works with other teachers to develop curricula or teaching materials but does not necessarily teach students, were added to types of teaching jobs held, a list that also includes elementary or secondary school teacher, substitute teacher, and teacher's aide.

Data from respondents who reported being certified in one of the eleven special education fields included in the survey were not disaggregated in the analyses.

3) State Supply and Demand Surveys

Three State surveys of special education personnel needs were reviewed. The language of individual State teacher licenses, established areas of shortage, standards for teacher caseloads, trends and initiatives within a state, and identified respondents to the survey determined the content and focus of the surveys. The Clearinghouse Advisory Committee, in reviewing these surveys, sought to glean what data could be most helpful to states in generating long-range recruitment and retention initiatives. With that data identified, the Committee believes it can make recommendations for a common core of data to be collected in all state-specific personnel needs surveys.

Summary of Observations

The three States collected survey data in various ways: through phone interviews, surveys and follow-up phone calls, and surveys. Respondent audiences included special education and other administrative personnel and relevant persons in institutions of higher education. Responses reflected both perceptions of need and conditions as well as numerical data.

Arizona surveyed the perceptions of 252 special education and administrative personnel through phone interviews addressing the following areas of concern:

- Most needed special education personnel (lists eleven areas of teaching: mental

retardation, specific learning disability, emotional disability, vision impaired, hearing impaired, speech and language impaired, autism, other health impaired, cross category, multi-impaired, and other)

- Most needed special education teaching certification (lists eight areas of teaching)
- Most needed related service personnel (lists three areas: speech and language pathologists, occupational therapists, physical therapists, and all three)
- Most successful recruitment method for special education and transition personnel
- Largest recruitment barrier in recruiting special education and transition personnel
- Type of personnel that work best in delivering transition services
- Community awareness of persons interested in becoming teachers and barriers to their entering the field
- Sufficiency of graduates from state universities
- Strategies to increase supply of graduates from preparation programs
- Best retention strategy for special education and transition personnel
- Most important recruitment activity the state department of education could undertake
- Most important retention activity the state department of education could undertake

Missouri sent surveys to administrators in 475 school districts and followed up with phone calls. Answers to the following questions were sought for the previous year by teacher licensure category, and included counselors, school psychologist/psychological examiner, and speech/language pathologist

- What was the number for new hires with full certification?
- What was the number for new hires with less-than-full certification?
- What was the number of positions still vacant as of September?
- What was the administrator opinion on supply of teacher applicants as compared with the number of positions available (5.0 scale: considerable shortage, some shortage, balanced, some surplus, considerable surplus)
- What are priority teaching fields for future growth?
- What were average starting salaries for the previous school year?

Ohio requested the following teacher supply information by surveying 33 Ohio institutions of higher education (IHE). The IHEs all have training programs in special education and related fields and report projected graduates and actual graduates in special education programs and related fields.

- The number of students currently majoring in a special education area at each level, i.e., freshman, sophomore, junior, senior, MS/MA, Ph.D.
- The number of graduates and post degree individuals by level who were recommended for initial certification

State surveys are idiosyncratic. Those reviewed do reveal, however, the breadth of information that could be useful to every state in developing a long-range personnel plan. That information includes

- number of students majoring in a special education or related services area and at what degree level
- number of persons eligible for certification each year, per state requirement
- capacity of traditional training programs as well as alternative routes to produce persons eligible for licensure/certification
- number of positions to be filled, i.e., funded positions vacant or staffed by not fully certified persons
- number of positions that are filled by certified teachers and by not fully certified persons
- effectiveness and efficiency of recruitment strategies, i.e., cost / hires
- retention of special education teachers at one year, three year, and five year points
- use of research based retention initiatives
- five year and ten year predictions of need for special educators and related services professionals by teaching or service assignment
- Employment outcomes, i.e., retention in school, district, state

4) National Association Surveys

National education associations provide a valuable service to the field through data on the demand for teachers in certain fields and anticipated supply. The breadth and detail of their surveys depend, as one would expect, on the constituency and expressed purposes of the association. With that in mind, the Advisory Committee reviewed the surveys of two associations to gain an awareness of components that are important to different groups.

- Teacher Supply and Demand in the United States: 1997 Report (American Association of Employment in Education)
- Teacher Supply and Demand in the United States: 1998 Report (American Association of Employment in Education)
- Teacher Education Pipeline IV: Schools, Colleges, and Departments of Education Enrollments by Race, Ethnicity, and Gender (American Association of Colleges for Teacher Education 1999)

■ *The American Association of Employment in Education (AAEE)*

The AAEE represents school district human resource administrators and college and university career service officers. Each year, for the past 24 years, the AAEE has conducted a national survey of all colleges and universities in the United States that have teacher education programs. Through these surveys, using career placement offices, AAEE collects data on the demand for educators by subject field in 11 geographic regions of the country. Respondents to the survey use a 5.0 point scale to

establish the demand as they know it. A value of 5.0 indicates a considerable demand for teachers in a particular subject and region; a value of 1.0 indicates a low demand; a value of 3.0 represents a balance between supply and demand for that teaching field in that region.

The AAEE survey currently includes seven fields of special education teaching. They are behavioral disorders, hearing impaired, learning disability, mentally handicapped, multiple handicapped, physically impaired, visually impaired. The survey also includes speech pathologists, school psychologists, and counselor education.

■ *The American Association of Colleges for Teacher Education (AACTE)*

The AACTE has conducted four surveys between 1987 and 1995 to identify the number of students in the teacher education pipeline by race/ethnicity and gender. Results of the surveys have been published in 1988, 1990, 1994, and 1999. Collection of student numbers by gender was not undertaken in the first two surveys. The survey instrument is mailed to all schools, colleges, and departments of education (SCDE) as identified through a combined list of AACTE members and National Association of State Directors of Teacher Education and Certification (NASDTEC) members. Data on fall 1995 enrollment numbers were requested from 1,026 institutions for the Teacher Pipeline IV survey. Data collection began in October 1995.

Data on persons preparing for a career in special education are collected and reported in Teacher Pipeline IV within the following tables:

- Table 18: Total SCDE Undergraduate Enrollment, by Discipline, 1989, 1991, and 1995
- Table 19: Total SCDE Undergraduate Enrollment, by Discipline and Race/Ethnicity, 1995
- Table 20: Total SCDE Undergraduate Enrollment, by Discipline and Race/Ethnicity, 1991
- Table 21: Total SCDE Undergraduate Enrollment, by Discipline and Race/Ethnicity, 1989
- Table 25: Special Education Enrollment, by Race/Ethnicity and Gender, 1995
- Table 60: Special Education Enrollment, by State and Race/Ethnicity, Ranked by Minority Percentage, 1995

The disaggregated special education data allow the study of enrollment trends in special education preparation programs. Although the classification of special education was not broken out by disability or type of service categories, the data do provide the field with a broad sense of the supply of teachers being prepared by the nation's SCDE's.

Culturally and linguistically diverse persons comprise 16 percent of the undergraduate enrollment in special education programs. This is the highest

percentage for which data are available from 1989 - 1995.

5) National Prediction Studies

The DOE's National Center for Education Statistics has published the Projections of Education Statistics to 2009 and Predicting the Need for Newly Hired Teachers in the United States to 2008-09.

■ *Projections of Education Statistics to 2009*

Projections of Education Statistics to 2009 is the 28th report in a series begun in 1964. It includes statistics on elementary and secondary schools and institutions of higher education at the national level. Projections for total school enrollment, high school graduates, classroom teachers, expenditures per pupil in average daily attendance in public schools, and average annual salaries for teachers to the year 2009 are among the relevant data provided.

Classroom teachers are reported by public schools and private schools. Special education teachers are not differentiated within any totals related to classroom teachers. Related services providers who may be classified as teachers are not identified by area of training or licensure.

■ *Predicting the Need for Newly Hired Teachers in the United States to 2008-09*

Predicting the Need to 2008-09 uses age-specific continuation rates of teachers from several different Schools and Staffing Surveys, the Department of Education's Common Core of Data survey, and unpublished data to predict the need for newly hired teachers in the United States over the next ten years. The predictions are based on the large number of teachers who are expected to retire, as well as the expected increase in student enrollment.

Teachers are not differentiated by main teaching assignments. Related services providers who may be classified as teachers are not identified by area of training or licensure.

Conclusions

Following its review, the Advisory Committee was able to draw conclusions across the surveys and reports:

- National comprehensive longitudinal studies do not report disaggregated data for special educators even when respondents have been able to identify themselves as having teaching assignments related to students with disabilities.
- National studies collecting information from teachers are inconsistent in their

listing of related services professions and collection of data about them.

- Special education caseloads vary across disabilities and service delivery models. This affects projections and should be reflected in them. Under these constraints, national projections are limited; and the broader issues remain the same.
- Perceptions do not carry the weight of numerical data and reduce the credibility of results.
- Most States do not routinely maintain a core data set that could be used for special educator preparation planning on the national level.
- Variations in State licensure fields mirror trends in special education and defy uniform collection of data by disability served or teacher licensure.
- National comprehensive longitudinal surveys do not include questions that address fully the interests or needs of special education around legal burdens, paperwork, broad range of instructional needs, and overlapping professional roles.

Recommendations

Staff from the National Clearinghouse for Professions in Special Education should

- Identify conveners of national survey planning groups and, with support from the Office of Special Education Programs, offer to become a contributor to development of the survey and determination of analyses to be undertaken.
- Acquire permission to access data sets so that analysis of respondent sets for special education can be accomplished.
- Work with the Federal Resource Center to develop a model core data set for states to collect data on supply, demand, recruitment, and retention of special educators. Disseminate this model.
- Contact national associations and organizations and offer to participate in development of supply and demand surveys so that data which are relevant to special education are collected.
- Provide recommendations to the ERIC Thesaurus so that the language of the law is included in its descriptors.
- Continue to highlight in Clearinghouse materials the need to increase culturally and linguistically diverse persons in the special educator pipeline. As noted in AACTE's 1999 *Teacher Education Pipeline IV: Schools, Colleges, and Departments of Education Enrollments by Race, Ethnicity, and Gender*, preparation programs should be guided not by the notion that educators of color are most necessary as role models for youngsters of color but by the more enlightened view that all children will benefit from a culturally diverse teaching force.

The Clearinghouse will disseminate the information and advance the agenda that emerged from this review through its outreach efforts, publications, and presentations. The opportunity to shape information from studies that are conducted yearly, or in a prescribed longitudinal sequence, should be seized. While teachers of

students with disabilities, and those who provide related services, are members of the national educator workforce, the dynamics of their recruitment, preparation, and retention present unique challenges. This information is desperately needed now so that preparation of a diverse, well-qualified special education workforce can be accelerated and not postponed until data from our own field can be collected.

The Clearinghouse is grateful to its Advisory Committee not only for ongoing support but also for the commitment of time and expertise to the review of these surveys.

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The National Clearinghouse for Professions in Special Education works to enhance the nation's capacity to recruit, prepare, and retain well qualified diverse educators and related services personnel for children with disabilities.

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