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Gender as a Factor in Special Education Eligibility, Services, and Results

This paper discusses differences in the characteristics of male and female students with disabilities, special education services provided to males and females with disabilities, and postschool results, by gender. It was published by the Office of Special Education Programs (OSEP), OSERS, U.S. Department of Education in the *Twentieth Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act* (IDEA). Two figures are omitted, although the data they display is made clear in the text. Otherwise, the paper is completely reproduced here. The reference citation is shown on the last page.

Although males and females comprise equal proportions of the school-aged population, males account for approximately two-thirds of all students served in special education (Doren, Bullis, & Benz, 1996; Wagner et al., 1991). In many cases, it is not clear if females are under-identified for special education, if males are over-identified, or if real differences exist in the prevalence of disability between males and females.

Much of the research on disability has stressed commonalities among individuals with disabilities, rather than addressed differences based on gender (Fine & Asch, 1988). Consequently, little is known about the different characteristics and experiences of males and females with disabilities.

SPECIAL EDUCATION ELIGIBILITY

More than two-thirds of all students receiving special education services are male (Doren et al., 1996; Wagner et al., 1991). Among secondary-aged students with disabilities, males constitute the largest proportion of each disability category except deaf-blindness, which is almost evenly divided between males and females. (See Table 1.) The disproportionate representation of males in special education seems greatest in the learning disability and emotional disturbance categories, which are often considered the disability categories with the most broadly defined eligibility criteria (Kratovil & Bailey, 1986).

Tables 1 and 2 show the percentage of males and females in different disability categories. Table 2 includes elementary and secondary school students in three disability categories; Table 1 reports data in eleven disability categories for secondary-aged students only.

Table 1. Gender of Secondary-Aged Students with Disabilities, By Disability Category

Disability	Percentage Male	Percentage Female
Learning disability	73.4	26.6
Emotional disturbance	76.4	23.6
Speech impairment	59.5	40.5
Mental retardation	58.0	42.0
Visual impairment	55.6	44.0
Hearing impairment	52.0	48.0
Deafness	54.5	45.5
Orthopedic impairment	54.2	45.8
Other health impairment	56.0	44.0
Multiple disabilities	65.4	34.6
Deaf-blindness	49.5	50.5

Table 2. Gender of Elementary and Secondary-Aged Students with Disabilities, By Disability Category

	Male	Female
Specific learning disability	69.3	30.8
Mental retardation	59.0	41.6
Emotional disturbance	79.4	21.0

Not only are females less likely than males to be identified for special education, but the characteristics of identified females differ from those of identified males (Richardson, et al., as cited in Gottleib, 1987). For example, girls in special education score lower on IQ tests than boys. The average IQ for secondary-aged females with disabilities was 74.4; the average for males was 81.6 (Gottleib, 1987; Wagner, et al., 1991). According to parent reports, a greater percentage of secondary-aged females in special education began having difficulties indicative of a disability at very young ages, which may also suggest more severe disabilities (Valdes, Williamson, & Wagner, 1990). Because learning disabilities and emotional impairments are not typically associated with below-average intelligence, the over-representation of males in these categories may skew the mean IQ of males in special education.

Possible Causes of Disproportionate Representation

Researchers and advocates offer several hypotheses for the fact that more males than females participate in special education. It is likely that no single explanation accounts for all of the disproportion but that combinations of factors result in the distribution previously described. First, physiological or maturational differences between males and females may cause higher rates of

disability among school-aged males. Second, differences in the behavior of male and female students may predispose males to the identification of a disability. For example, female students may adapt better to the predominant school culture and norms. Teachers may also react differently to male and female students, which can result in higher rates of referral and classification for male students. Third, methods used to identify students with learning disabilities, emotional disturbance and speech and language impairments may be biased and, as such, may contribute to the disproportionate representation of males and females in special education (Harmon, Stockton, & Contrucci, 1992).

Physiological/Maturational Differences. Some researchers cite physiological or maturational differences between males and females as a cause for some disproportionate representation. For example, girls are believed to have fewer birth defects and more rapid maturation than boys. Females may be less prone to disability because they have two X chromosomes, and one of the X chromosomes may compensate for a defect in the other. Because males have one X and one Y chromosome, they may be more susceptible to disabilities associated with chromosomal abnormalities, such as hemophilia and fragile-x syndrome, which can cause mental retardation (Harmon et al., 1992). Some researchers theorize that differences in the structure of male and female brains may also contribute to differences in disability prevalence. They speculate that male brains are more lateralized than female brains, meaning that one hemisphere is more dominant than the other (Hayden-McPeak, Gaskin, & Gaughan, 1993). For example, functional magnetic resonance imaging (FMRI) shows that phonological processing in men engages the left inferior frontal gyrus in the brain. In women, phonological processing activates both the left and right interior frontal gyrus (Shaywitz, 1996). Parts of the corpus callosum, which connects the two hemispheres, are also more extensive in females. The exact relationships between these biological differences and disability are unclear (Hayden-McPeak et al., 1993).

Research on differences between young boys and young girls suggests that girls mature more rapidly than boys (Harmon et al., 1992). Many preschool programs stress impulse control, small-muscle development, and language skills, but many young girls are competent in these areas before arriving in preschool. The preschool experience may raise boys' language achievement scores, thus narrowing the gap between girls and boys (Larson & Robinson, 1989). However, maturational gaps could lead to inflated referral of males for special education evaluation.

To determine if there are differences in vulnerability to learning failure among young children, Karlen, Hagin, and Beecher (1985) administered a series of tests to all kindergartners and first graders in a sample of elementary schools. The study showed very small or insignificant differences between the percentage of males and females at risk of school failure in urban, rural, and independent schools. However, for unknown reasons, the differences were significant in suburban schools; 31 percent of the boys and 20 percent of the girls were at risk.

Shaywitz, Shaywitz, Fletcher, and Escobar (1990) found significant differences in the percentages of boys and girls identified by their schools as having reading disabilities but found no differences based on achievement and IQ test scores. They also found that children who were identified by their schools as having a reading disability but who did not meet objective criteria for reading disabilities were more likely to exhibit difficulties in behavior, attention, fine motor skills, and language skills. Conversely, children who were not identified as having a reading disability despite meeting eligibility criteria were likely to have no perceived problems with behavior. When students with learning disabilities also have attention deficit disorder (ADD), their learning disabilities may be more severe and resistant to intervention. Because ADD is more prevalent in males than in females, males may be more likely than females to be identified by their schools has having learning disabilities (Felton & Wood, 1989; Lubs et al., 1991; Lyon, 1996).

School Bias. Males may be referred and found eligible for special education at higher rates than females because of gender differences between female teachers and male students or differences between the dominant school culture and male behavior (Kedar-Volvodas, 1983). Women outnumber men in the general education teaching force (87 percent to 13 percent), particularly at the elementary level, when most students are referred for special education (Cook & Boe, 1995). As long ago as 1976, evidence suggested a bias in teachers' evaluation of students' need for special education based on the student's gender. In an historic study, when given identical descriptions of individual children, teachers were more likely to refer boys for evaluation than girls (Gregory, 1977). Female teachers may be more likely to identify boys' behavior and learning styles as indicative of a disability, inflating the referral of boys for special education evaluation (Gottleib, 1987).

Other researchers speculate that some educators may have higher expectations for boys than for girls. If boys do not perform to expected levels, teachers may refer them to special education in greater numbers than girls, for whom they have lesser expectations (Gottleib, 1987). However, data suggest that boys are more likely than girls to be referred for special education based on their behavior and that girls are typically referred for concerns about academic performance (Clarizio & Phillips, 1986). This finding may contradict the hypothesis that disproportion is due to differing academic expectations.

Assessment Bias. The disproportionate representation of males in programs for students with emotional disturbances may reflect a bias in the ways emotional disturbance is defined and/or the instruments used to identify students as eligible under those definitions. Some assessment tools that schools use to evaluate students do not capture depression, suicidal ideation, or suicide attempts (Caseau, Luckasson, & Kroth, 1994). Adolescent girls experience a higher rate of depression than boys (Boggiano & Barrett, 1992; Kasdin, 1990; Peterson, Sarigiani, & Kennedy, 1991), but the eligibility criteria for services under the emotional impairments category, or teacher tolerance of the withdrawal or depression exhibited by young women, may reduce females' referral for evaluation and eligibility (McIntyre, 1990). Those girls who receive services for emotional impairments usually exhibit the externalizing behaviors typically associated with boys (Caseau et al., 1994).

SERVICES FOR MALES AND FEMALES WITH DISABILITIES

Once students are identified as eligible for special education, the services they receive do not differ greatly by gender, and teachers appear to consider an individual student when selecting instructional techniques (Leinhardt, Seewald, & Zigmond, 1982; Wagner et al., 1991). No significant differences exist in the amount of funds expended on special education and related services for males and females (Singer & Raphael, 1988).

Few significant gender differences were identified in secondary course-taking for students with disabilities, although higher rates of home economics and life skills instruction for females and a higher rate of vocational education for males were noted (Wagner et al., 1991). Secondary-aged females with disabilities were more likely than males to receive some support services. (See Table 3. The disproportion fell particularly in occupational therapy/life skills training, transportation, and speech therapy (Cameto, 1993).

Table 3. Percentage of Secondary-Aged Students with Disabilities Who Received Different Types of Services, by Gender

Services	Male	Female
Job training	63.2	56.8
Speech/language therapy	36.6	43.1
Personal counseling/therapy	34.6	33.7
Occupational therapy/life skills trng	28.9	46.8
Tutor, reader, interpreter	32.9	32.2
Physical therapy, mobility training	8.5	12.5
Help with transportation	13.0	18.5

EDUCATIONAL RESULTS FOR MALES AND FEMALES WITH AND WITHOUT DISABILITIES

One way to evaluate whether education services are effective in meeting students' needs is to examine student results. These may include in-school results, such as grades and dropout rates, or post-school results, such as employment, wages, and postsecondary education.

In-School Results

Overall, girls with and without disabilities had better in-school results than boys with and without disabilities. They received better grades, were more likely to graduate from high school, and were less likely to be suspended or expelled. Boys did as well as girls on many standardized achievement tests and scored slightly better than girls on 12th-grade math achievement.

Test Scores and Grades. Much has been made of perceived differences between males and females in verbal and quantitative skills. Studies of achievement test scores indicate no consistent, sizable differences in verbal ability between boys and girls (Hyde & Linn, 1988). Results on reading achievement, one aspect of verbal skills, are unclear. The National Assessment of Educational Progress (NAEP) and the National Education Longitudinal Study show girls performing better than boys on reading tests. The High School and Beyond Survey shows boys performing better than girls on reading and vocabulary. Differences in results may reflect the different ages sampled in each survey or differences in the test given. All three surveys show very small differences in achievemen between boys and girls (American Association of University Women [AAUW], 1992), except in writing; data from NAEP show girls performing consistently better than boys on writing tasks (Mullis, Owen, & Phillips, 1990).

Gender differences in math achievement appear to be small and shrinking (Friedman, 1989; Mullis, Dossey, Owen, & Phillips, 1991). A recent NAEP administration showed few differences between boys and girls in math ability at grades 4 and 8, apart from a slight advantage for boys in measurement and estimation. By 12th grade, some differences arose, and boys showed a small advantage in each area except algebra (Mullis et al., 1991).

In general education, girls typically receive better end-of-year and end-of-course grades than boys (AAUW, 1992). Again, it is not clear if girls work harder at mastering classroom material, if they have longer attention spans that permit them to acquire knowledge and skills more effectively, or if they are rewarded by teacher for good behavior. Whatever the reason, this pattern of grade accomplishment holds for students in special education, as well as in general education. Despite their lower mean IQ scores and the relatively early onset of their developmental difficulties, on average girls in special education receive higher end-of-year and end-of-course grades than boys. Grade point averages for secondary-aged females with disabilities are significantly better than grade point averages for their male counterparts.

High School Completion. Females with disabilities are slightly more likely than males to graduate from high school and are less likely to be suspended or expelled. This is also true for females without disabilities (AAUW, 1992). Although females with disabilities drop out of school at about the same rate as males, the reasons differ. Parents report that 23 percent of female dropouts leave school because of marriage or parenthood, compared with only 1 percent of male dropouts (Valdes et al., 1990; Wagner, as cited in Wagner et al., 1991). Both male and female dropouts report disliking school and doing poorly in school (Valdes et al., 1990).

Postschool Results

Despite their better academic performance, females with disabilities have less positive postschool results than their male peers (although one study [Levine & Edgar, 1994] noted few significant differences in postschool results for men and women with disabilities, except for parenting). They are less likely to be employed, have lower wages, and are less likely to enroll in postsecondary education or training.

Employment. Young men with disabilities are more likely than young women to be employed and to earn more money (Frank, Sitlington, & Carson, 1991; Hasazi, Johnson, Hasazi, Gordon, & Hull, 1989; Kranstover, Thurlow, & Bruininks, 1989; Sitlington & Frank, 1990; Wagner, 1992). After being out of high school for three to five years, 65.9 percent of males and 48.6 percent of females report having been employed in the past year. When controlling for other factors, young men with disabilities earn $1814 more per year than young women with disabilities (Wagner, Blackorby, Cameto, & Newman, 1993). Young men earn higher hourly wages than young women and, on average, men work more hours (Sitlington, Frank & Carson, 1992; Wagner, 1992). The wage gap between men and women is not restricted to those with disabilities, however. In general, women make up 45 percent of the work force, but they work primarily in clerical, service, or professional positions (Fullerton, 1989; Taeuber, 1991). Even when women have the same level of education as men, they earn less.

Several other factors may contribute to the lower incomes earned by women with disabilities. First, many young women with disabilities have children and, consequently, do not work full time. Three to five years after leaving high school, 41 percent of women with disabilities have children of their own, compared with 28 percent of same-aged women in the general population (Wagner, 1992). As described in the next section, young women with disabilities are less likely than young men to enrol in vocationally oriented courses in high school, which may also limit their level of job competitiveness. In addition, young women with disabilities are less likely than men to pursue additional education, training, and rehabilitation after high school.

Postsecondary Education, Training, and Rehabilitation. Fewer women than men with disabilities participate in postsecondary education and training in the years shortly after high school. A larger percentage of women take postsecondary courses at four-year colleges, while a larger percentage of men enroll in job training programs and two-year colleges (Valdes et al., 1990). This is also true for youth without disabilities; 54 percent of all beginning postsecondary students are female (U.S. Department of Education, 1996). Women with disabilities are also less involved with vocational rehabilitation services than men; this may contribute further to women's economic disadvantage (Gragg, 1997; Menz et al., 1989). Studies have found that the rehabilitation system is more helpful for men who are under 45 years of age, White, better educated, middle class, articulate, aggressive, and motivated (Kirchner, 1987; Stone, as cited in Fine & Asch, 1988), and women are more likely than men with similar skills and aptitudes to be directed toward traditionally female occupations (Packer, as cited in Fine & Asch, 1988), which often pay low wages.

Independent Community Living. Living independently, marrying, and having children are other aspects of transition from adolescence to adulthood. Three to five years after leaving high school, almost one-third of young women with disabilities are married, compared with 15 percent of young men. Due to their marital status, young women with disabilities are more likely than young men to live apart from their parents. However, their lower rates of employment and greater social isolation limit their overall independence (Wagner, 1992).

Compliance with community norms and laws is another measure of adjustment. Three to five years after leaving secondary school, 15.8 percent of males and 4.2 percent of females with disabilities have been arrested (Valdes et al., 1990). While in school, males with disabilities are 2.4 times more likely than females to be arrested, controlling for other variables (Doren et al., 1996).

SUMMARY

It is not clear why males are disproportionately represented in special education, although it appear that the disproportion is greatest among those with learning disabilities and emotional disturbance. Maturational gaps between boys and girls may inflate referrals of boys for special education evaluation. It is also possible that, although learning disabilities are equally prevalent among males and females, ADD, which can exacerbate the efforts of a learning disability, is more prevalent in males than in females. As a result, males with learning disabilities may be more likely than females to be identified by their schools (Felton & Wood, 1989; Lubs et al., 1991; Lyon, 1996). Criteria for eligibility under the emotional disturbance category may also contribute to the over-representation of males in special education (Caseau et al., 1994). Consequently, in addition to enrolling fewer females in special education, those females identified with disabilities have a different disability distribution from males in special education.

Girls in special education receive more support services than boys, with the exception of job training. Girls with and without disabilities have better grades in secondary school than boys and are more likely to enroll in four-year colleges. Boys with disabilities are more likely than girls to enroll in occupationally oriented vocational education in high school and in postsecondary vocational training or two-year college courses. In the years after high school, young men with and without disabilities are more likely to be employed than young women, work more hours, and earn higher wages. A larger percentage of young women than young men with disabilities live independently, primarily because many women marry shortly after leaving school. Three to five years after leaving high school, almost one-third of young women with disabilities are married, and 41 percent have children. This likely contributes to their reduced employment and wages.

ISSUES REMAINING

Many questions remain about the relationship between gender and disability. Why do female special education students receive better grades than male students, despite having more severe disabilities? To what extent, if at all, are young women with disabilities discouraged from enrolling in training and rehabilitation programs that would prepare them for higher paying jobs? Are males and females treated differently in rehabilitation programs, and, if so, what is the basis for that differential treatment? To what extent do physiological differences between males and females relate to the disproportionate representation of males in special education?

Disaggregated Data on Males and Females with Disabilities

Some steps are being taken to address these issues. Researchers in special education are beginning to recognize the need for analyses that are disaggregated by gender. General and special education research shows that males and females may experience school differently and, as a result, may react differently to interventions or instructional strategies (AAUW, 1992). Consequently, data regarding the issues of gender and disability are gradually becoming available.

Sensitivity to Gender Issues in Education

Many educators are now aware of research showing differences in teacher-student interaction based on gender. Males are more often called on in class and are asked more probing questions by their teachers (Sadker & Sadker, 1994). Increased sensitivity to gender issues in schools will likely affect special education as well as general education. For example, teacher bias in over-referring male students for special education evaluation may be targeted as one aspect of a school's gender-related self-study. Likewise, schools may examine gender biases in counseling; enrolling more female students in vocational education classes may improve their employment and wages.

Issues related to gender in special education are closely tied to understanding gender issues in general education and contemporary culture. Understanding the differences between the behaviors of males and females and culturally defined gender roles is challenging. Awareness of the issues surrounding gender and special education is the first step in making necessary changes in educational practice.

References

American Association of University Women. (1992). *How schools shortchange girls*. Washington, DC: Author.

Boggiano, A. K., & Barrett, M. (1992). Gender differences in depression in children as a function of motivational orientation. *Sex Roles*, 26, 11-17.

Cameto, R. (1993). Support services provided by secondary schools. In M. Wagner (Ed.). *The secondary school programs of students with disabilities* (pp. 6:1-6:42). Menlo Park, CA: SRI International.

Caseau, D. L., Luckasson, R., & Kroth, R. L. (1994). Special education services for girls with serious emotional disturbance: A case of gender bias? *Behavior Disorders*, 20(1), 51-60.

Clarizio, H. E., & Phillips, S. E. (1986). Sex bias in diagnosis of learning disabled students. *Psychology in Schools,* 23, 44-53.

Cook, L. H., & Boe, E. E. (1995). Who is teaching students with disabilities? *Teaching Exceptional Children*, 28, 70-72.

Doren, B., Bullis, M., & Benz, M. R. (1996). Predicting the arrest status of adolescents with disabilities in transition. *Journal of Special Education*, 29(4), 363-380.

Felton, R. H., & Wood, F. B. (1989). Cognitive deficits in reading disability and attention deficit disorder. *Journal of Learning Disabilities,* 22, 3-13.

Fine, M., & Asch, A. (Eds.). (1988). *Women with disabilities: Essays in psychology, culture, and politics*. Philadelphia, PA: Temple University Press.

Frank, A. R., Sitlington, P. L., & Carson, R. (1991). Transition of adolescents with behavioral disorders -- Is it successful? *Behavioral Disorders*, 13, 180-191.

Friedman, L. (1989). Mathematics and the gender gap: A meta-analysis of research studies on sex differences in mathematical tasks. *Review of Educational Research*, 59, 185-213.

Fullerton, H. (1989). New labor force projections spanning 1988 to 2000. *Monthly Labor Review,* 112, 2.

Gottleib, B. W. (1987). *Gender differences in cognitive profiles among urban children placed in special education.* (ERIC Document Reproduction Service No. ED 387 972)

Gragg, F. (1997). *A review of the effects of the Rehabilitation Act Amendments of 1992.* Rockville, MD: Westat.

Gregory, M. K. (1977). Sex bias in school referrals. *Journal of School Psychology,* 15(1), 5-8.

Harmon, J. A., Stockton, T. S., & Contrucci, V. J. (1992). *Gender disparities in special education.* Madison, WI: Wisconsin Department of Public Instruction.

Hasazi, S. B., Johnson, R. E., Hasazi, J. E., Gordon, L. R., & Hull, M. (1989). Employment of youth with and without handicaps following high school: Outcomes and correlates. *Journal of Special Education*, 23, 243-255.

Hayden-McPeak, C., Gaskin, S. T., & Gaughan, L. K. (1993, April). *Bad boys, good girls: A review of the research on gender differences in preschoolers and a re-examination of assessment, child rearing, and educational practices*. Paper presented at the Annual Convention of The Council for Exceptional Children, San Antonio, TX. (ERIC Document Reproduction Service No. ED 363 030)

Hyde, J., & Linn, M. (1988). Gender differences in verbal ability: A meta-analysis. *Psychological Bulletin*, 104, 53-69.

Karlen, A., Hagin, R. A., & Beecher, R. (1985). Are boys really more vulnerable to learning disability than girls? *Academic Psychology Bulletin*, 7, 317-325.

Kedar-Volvodas, G. (1983). The impact of elementary children's school roles in teacher attitudes: An interactional analysis. *Review of Educational Research*, 53(3), 415-437.

Kirchner, C. (1987). Assessing the effects of vocational rehabilitation on disadvantaged persons: Theoretical perspectives and issues for research. *Proceedings of the Annual Meeting of the Society for the Study of Chronic Illness, Impairment, and Disability, 1984-85.* Salem, OR: Willamette University Press.

Kranstover, L. L., Thurlow, M. L., & Bruininks, R. H. (1989). An analysis of the employment outcomes of young adults with mental retardation. In P. Wehman & J. Kregel (Eds.). *Supported employment for persons with disabilities: Focus on excellence* (pp. 257-267). New York, NY: Human Sciences Press.

Kratovi, J., & Bailey, S. (1986). Sex equity and disabled students. *Theory into Practice,* 25(4), 250-256.

Larson, J., & Robinson, C. (1989). Later effects of preschool on low-risk children. *Early Childhood Research Quarterly*, 4, 133-144.

Leinhardt, G., Seewald, A. M., & Zigmond, N. (1982). Sex and race differences in learning disabilities classrooms. *Journal of School Psychology*, 74(6), 835-843.

Levine, P., & Edgar, E. (1994). An analysis by gender of long-term postschool outcomes for youth with and without disabilities. *Exceptional Children*, 61(3), 282-300.

Lubs, H. A., Duara, R., Levin, B., Jallad, B., Lubs, M., Rabin, M. , Kushch, A., & Gross-Glenn, K. (1991). Dyslexia subtypes: Physiologicals, behavior, and brain imaging. In D. D. Duane & D. B. Gray (Eds.). *The reading brain: The biological basis of dyslexia* (pp. 89-177). Parkton, MD: York Press.

Lyon, G. R. (1996). Learning disabilities. *The Future of Children,* 61(1), 54-76.

McIntyre, L. L. (1990). Teacher standards and gender: Factors in special education referral? *The Journal of Educational Research*, 8(3), 166-172.

Menz, F. E., Hansen, G., Smith, H., Brown, C., Ford, M., & McCrowey, G. (1989). Gender equity in access, services, and benefits from vocational rehabilitation. *Journal of Rehabilitation,* 55, 31-40.

Mullis, I., Dossey, J. A., Owen, E. H., & Phillips, G. W. (1991). *The state of mathematics achievement: NAEP's 1990 assessment of the nation and the trial assessment of the states.* Princeton, NJ: Educational Testing Service.

Mullis, I., Owen, E., & Phillips, G. (1990). *Accelerating academic achievement: A summary of 20 years of NAEP.* Washington, DC: U.S. Department of Education.

Peterson, A. C., Sarigiani, P. A., & Kennedy, R. E. (1991). Adolescent depression: Why more girls? *Journal of Youth and Adolescence,* 20, 247-271.

Sadker, M., & Sadker, D. (1994). *Failing at fairness*. New York, NY: Touchstone.

Shaywitz, S. E. (1996). Dyslexia. *Scientific American*, 275(5), 98-104.

Singer, J. D., & Raphael, E. S. (1988). *Per pupil expenditures for special education: To whom are limited resources provided?* Cambridge, MA: Harvard University (ERIC Document Reproduction Service No. ED 302 024)

Sitlington, P. L., & Frank, A. R. (1990). Are adolescents with learning disabilities successfully crossing the bridge into adult life? *Learning Disability Quarterly*, 13, 97-111.

Sitlington, P. L., Frank, A R., & Carson, R. (1992). Adult adjustment among high school graduates with mild disabilities. *Exceptional Children,* 59, 221-233.

Taeuber, C. (Ed.). (1991). *Statistical handbook on women in America*. Phoenix, AZ: Oryx Press.

U.S. Department of Education. (1996). *Descriptive summary of 1989-90 beginning postsecondary students: Five years later*. Washington, DC: Author.

Valdes, K., Williamson, B., & Wagner, M. (1990). *The national longitudinal transition study of special education students: Statistical almanac (Vol. 1).* Menlo Park, CA: SRI International.

Wagner, M. (1992). Transition: Changes, challenges, cautions In M. Wagner, R. D'Amico, C. Marder, L. Newman, & J. Blackorby (Eds.). *What happens next? Trends in postschool outcomes for youth with disabilities* (pp. 8:1-8:14). Menlo Park, CA: SRI International.

Wagner, M., Blackorby, J., Cameto, R., & Newman, L. (1993). *What makes a difference? Influences on postschool outcomes of students with disabilities*. Menlo Park, CA: SRI International.

Wagner, M., Newman, L., D'Amico, R., Jay, E. D., Butler-Nalin, P., Marder, C., & Cox, R. (1991). *Youth with disabilities: How are they doing?* Menlo Park, CA: SRI International.

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