Career Attainments of Deaf and Hard of Hearing Alumni Fifteen Years After College

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Abstract

This article reports on the results from a national longitudinal survey of 240 graduates with hearing loss from 47 colleges with support service programs. The overall findings demonstrate an economic pay-off from the postsecondary training of these alumni. Most respondents had made long-term gains in their educational, occupational, and economic attainments. A majority were satisfied with their supervisors, prospects for promotions, and careers. However, between 1988 and 1998 males made more consistent gains in earnings than females. The implications of these findings are presented for secondary professionals, vocational rehabilitation counselors, and postsecondary service providers.

There were an estimated 258,000 students with hearing loss enrolled at the nation's 5,000 colleges and universities in 1989-1990 (USDED, 1993). Watson and Schroedel (2000) calculated that 197,000 of these students were hard of hearing, 52,000 deafened at or after age 19, and 9,000 deafened before age 19. In contrast to the *one-time* provision of accommodations, such as, curb cuts or wider doorways for students with physical disabilities, accommodating students with hearing loss, especially those who are deaf, requires *on-going* support services, special methods of instruction, smaller class sizes, and specialized communication devices. These expensive on-going accommodations place a hardship on many institutions of higher education. This is particularly acute when most states currently face reduced revenues after a decade of spending increases, tax cuts, and depletion of surplus funds (Wolf, 2000).

In response to external constituencies such as governments, parents, alumni, and other donors, colleges and universities conduct surveys of their graduates to establish the benefits of higher education. Administrators, faculty, and support staff use the results of these surveys to modify instructional curricula, career-preparation programs, and on-campus services. Various colleges serving deaf and hard of hearing students have surveyed their graduates (e.g., MacLeod-Gallinger, 1998; Olson, 1991; Rawlings, King, Skilton, and Rose, 1993; Thompson and Lucas, 1981). However, differences in the kinds of college attended significantly influence the level of acquired degree, type of occupation, and earnings of alumni (Crammatte, 1987; Schroedel and Watson, 1991). Only a few researchers have simultaneously evaluated the attainments of deaf and hard of hearing graduates from multiple colleges and universities (Crammatte, 1987; Quigley, Jenne, and Phillips; 1968; Schroedel and Watson, 1991).

Another drawback from all of these studies is that they have gathered information from one point in time from respondents. Thus, time confounds comparisons between the results of surveys done at different points in time with different participants. Longitudinal surveys overcome

many of the limitations of one-time studies. By repeated contact with one group over time, such surveys can assess progress in the *careers* of alumni and identify explicit factors contributing to long-term socio-economic attainments.

Methods

Survey participants were deaf and hard of hearing graduates in the classes of 1983, 1984, and 1985 from 47 institutions of higher education in 23 states. All of these colleges provided special support services and had 15 or more deaf or hard of hearing students enrolled each year during 1984 and 1985. They were selected from a national directory prepared by Rawlings, Karchmer, and DeCaro (1983). First contacted by mail in 1985, these alumni were further surveyed in 1989, 1994, and 1999. In preparation for the 1999 survey, 311 of the 400 (76%) respondents in the 1994 survey were successfully traced and 240 of these 311 alumni (77%) returned questionnaires after three contacts by mail and one by TDD. Although tracing and survey response rates were reasonably high for all surveys, the number of respondents decreased from 490 in 1989 to 240 in 1999. Some analyses, comparing changes between 1989 and 1999 in the socioeconomic attainments of alumni, were limited to only respondents who participated in all surveys during 1989, 1994, and 1999. Other analyses focused on respondents' accomplishments in 1999.

Respondents

The 1999 sample contained 240 respondents who resided in 39 states at that time. Their average age was 38 and 53% were female. Ninety-three percent were white and 7% were from ethnic minority backgrounds. The under-representation of the latter alumni reflected their chronic underparticipation in postsecondary education (Schroedel and Watson,1991). Seventy-one percent identified themselves as deaf and 29% as hard of hearing. Recalling that the alumni in this study graduated from colleges that provided *programmatic* support services, the hard of hearing graduates were probably not typical of hard of hearing alumni from regular colleges and universities. The distribution of completed degrees among alumni during 1999 was: vocational degrees (28%), associates degrees (24%), bachelors degrees (32%), masters degrees (15and), and a doctorate (1%).

Results

Labor force participation: Eighty-five percent of 1999 survey respondents were in the work force in contrast to 90% of college graduates without disabilities (Hale, Hayghe, and McNeil, 1998). Among the former, 5% were unemployed compared to 2.5% of associates degree recipients and 1.9% of bachelors degree recipients among workers without disabilities (U.S. Bureau of Labor Statistics, 1999).

Underemployment: An underemployed person is one whose abilities or educational credentials are higher than those usually required for the job in which he or she presently works (Clogg, 1979). Using a definition of underemployment based upon level of completed degree (see Schroedel and Geyer, in press), it was determined that 13% of alumni were underemployed in 1994 and 15% in 1999. Comparatively, 27% of the non-disabled workforce with completed college degrees were similarly underemployed (Survey of Income and Program Participation, 1993). Among deaf and hard of hearing college alumni, those most at risk to underemployment had vocational degrees. Furthermore, there are reasons to believe that proportionately more vocationally successful alumni with hearing loss participated in the survey than their less vocationally successful peers. This factor probably deflated the rates for underemployment and unemployment found in this sample and restricts comparisons to samples of college-educated workers without disabilities.

Occupational attainments: Most respondents in 1999 were well established in their jobs: their average tenure on their current job was between 4-5 years and 24% had the same job for nine-plus years. The 195 employed alumni in 1999 worked in a wide range of 70 different occupations. Overall, there was much less occupational clustering, a factor which limits upward career mobility, than reported in studies of deaf workers without a college education (Barnartt, 1985; Terzian and Saari, 1982). These results imply that access to broader career training options expands employment opportunities and subsequently reduces occupational segregation.

Trends in educational and occupational attainments: Between 1983-85 and 1999 the percentage of alumni completing masters degrees increased from 5% to 16% and the proportion with vocational and associates degrees decreased from 62% to 52%. The percentage with bachelors degrees remained stable during the same period (32% to 33%). Furthermore, there was an increase in the proportion of alumni working in professional, managerial, and technical occupations from 49% in 1989 to 56% in 1999. However, in 1999 there was a larger percentage of males over females in these occupations (61% vs. 52%). This reversed a trend since 1985 in which females in this sample predominated in these occupations (El-Khiami, 1993; Schroedel, Geyer, and Mc Gee,1996; Schroedel and Watson, 1991).

Economic attainments: The annual 1998 earnings of alumni were strongly influenced by the level of the degree they completed: vocational degrees ($15,000-$19,999), associate's degrees ($25,000-$29,999), bachelor's degrees ($20,000-$24,999), and master's or doctorate degrees ($35,000-$39,999). However, these alumni at all degree levels earned less than college graduates who hear: associate's degrees ($31,700), bachelor's degrees ($40,100), and master's degrees ($50,000) (U.S. Bureau of Labor Statistics, 1999).

Why did deaf and hard of hearing recipients with associate's degrees earn more than their peers with bachelor's degrees? Although there was not any significant difference in the proportion of males and females among these degree recipients, gender did influence this disparity in earnings. This discrepancy is primarily rooted in the long-term effects of gender patterns in choice of college majors (Fisher, Harlow, and Moores, 1974; MacLeod-Gallinger, 1992; Schroedel, 1986; Schroedel and Watson, 1991). In short, deaf males are much more likely than their female counterparts to be trained in the crafts, technical, and scientific fields which lead to higher-paying jobs. Furthermore, disproportionately more males over females obtained vocational and associate's degrees (Schroedel, et al., 1996; Schroedel and Watson, 1991).

Over time males made more consistent and larger gains in income than their female counterparts. Whereas men increased their earnings from $10,000-$19,999 in 1988 to $30,000-$39,999 in 1998, the earnings of women increased from $10,000-$19,999 to $20,000-29,999 during the same time span. The 30% gap in earnings favoring deaf males over deaf females has been documented since the 1960s and persists into the 1990s (Schroedel, et al., 1996). This pattern continues despite the fact that these females were more likely to acquire higher degrees than their male peers.

Other career attainments: Most respondents had positive attitudes towards their supervisors and prospects for promotions and their careers. Forty-five percent of alumni had obtained promotions since 1994, and those who were more frequently promoted had more favorable attitudes towards their prospects for promotion. A supportive supervisor is a pivotal factor in gaining promotions and workplace accommodations (Mowry and Anderson, 1993; Schroedel, Mowry and Anderson, 1994).On the downside, 25% reported that their college training was not helpful to their careers.

Conclusions

Although the deaf and hard of hearing alumni in this survey earned less and experienced more unemployment than their similarly educated peers who hear, this study provided evidence of the economic advantages of postsecondary training. A majority of respondents were well established in a wide range of jobs and were satisfied with their careers and prospects for promotions. A near majority had been promoted during the past five years and there was an increase in the proportion with masters degrees leading to better-paying jobs.

Implications

Among areas identified by this survey, the following two topics especially need attention from secondary, rehabilitation, and postsecondary professionals.

Enrich the career potential of females. It is important for professionals to intervene early to increase the prospects that deaf and hard of hearing females will enter into better-paying careers that will help reduce the long-standing disparity in earnings with their male counterparts. As a first step, career educators need to change the traditional gender stereotypes that many of these females have about jobs. These stereotypes begin in junior high school and persist into college (Kolvitz and Ouellette, 1980; Kovelchuk and Egelston, 1976). In addition, school

teachers should encourage eligible females to enroll in advanced computer, mathematics, and science courses. School and rehabilitation counselors can advise these young women to select appropriate technical and scientific college majors. Rehabilitation counselors should contact these students and their parents as early as the ninth grade. Clarifying parents' educational and occupational expectations for their deaf adolescents is particularly important (Schroedel and Carnahan, 1991). Moreover, postsecondary and rehabilitation professionals should co-monitor students who change their fields of training.

Strengthen career goals. Providing career counseling is important to reduce the probabilities that deaf and hard of hearing graduates will experience underemployment and unemployment. One study found that deaf high school seniors more motivated about their vocational goal were more motivated, ready, and likely to complete postsecondary training than those unmotivated about their career goal (Schroedel, 1991). Considering that 75% of deaf students quit college, it is important that these students have clear vocational goals (Stinson and Walter, 1997).

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