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ABSTRACT

This paper describes the educational, employment, and earnings status of deaf high school graduates 1 and 10 years after leaving high school, in order to evaluate the ability of young deaf adults to profit from further education and to earn a living after leaving high school. Questionnaires were completed by almost 4,000 graduates of 27 educational programs for deaf students in 21 states. Results showed that: (1) Within 10 years of their graduation from high school, approximately 50% of all deaf high school graduates had participated in some form of postsecondary education. (2) There was a considerably lower labor force participation rate and a higher unemployment rate within the deaf population compared to the hearing population 1 year after graduation; these differences were less at 10 years after graduation. (3) While the occupational and earnings differences between the employed hearing population and employed deaf persons 10 years after graduation were not as severe as differences 1 year after graduation, a discrepancy did persist. (4) High school graduates who did not attend college had higher unemployment rates, were employed in blue collar jobs more often, and earned significantly less than those completing degree programs. (JDD)

Outcomes for Graduates of Secondary Education Programs for Deaf Students: Early Findings of a Cooperative National Longitudinal Study

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BACKGROUND

The purpose of this paper is to describe the educational, employment and earnings status of deaf high school graduates one and ten years after leaving high school in order to evaluate the ability of young deaf adults to profit from further education and to earn a living after leaving high school

The origins of this study go back to 1977 when the Conference of Educational Administrators Serving the Deaf (CEASD) at its annual meeting in Toronto, Canada, passed the following resolution

> "*WHEREAS (CEASD) recognizes the importance of maintaining contact with alumni both in terms of the goals of education for deaf adults, and in terms of potential feedback to improve the quality of educational programs;*
>
> *WHEREAS each member school of CEASD has much to gain from such a followup and is in a better position to collect information than an outside organization.*
>
> *RESOLVED: First, that (CEASD) endorse its Educational Research Committee's proposed plan to develop a set of suggested guidelines to assist interested secondary and postsecondary programs for the deaf in establishing procedures for the systematic followup of their own alumni; Second, that these guidelines have such specificity that a program is able to interpret its findings relative to pooled findings derived from similar procedures used by other programs for the deaf nationally*"

This study reflects an interest of secondary programs and their staff in keeping in touch with their graduates and serves as a general reminder of the goals of education. It also enables schools to make group comparisons between their own graduates and (a) graduates of other secondary programs for the deaf, and (b) hearing high school graduates nationally

Primary focus is on four basic questions:

1. What proportion of deaf high school graduates continue their education beyond the secondary level?

2 What are the labor force and employment conditions for deaf high school graduates?

3. What kinds of occupations and what levels of earnings do deaf high school graduates have?

4. What is the influence of postsecondary education on employment conditions, occupations and earnings of deaf high school graduates?

PROCEDURES

A questionnaire was developed in 1978. This questionnaire and a set of procedures were field tested in 1979 with the participation of seven schools and the National Technical Institute for the Deaf (NTID) at the Rochester Institute of Technology (RIT) managing the project. An additional 12 schools joined the project and administered the survey in 1980. At present 27 educational programs for deaf students in 21 states participate in this system for following up on their high school graduates. As of 1986 the data base included information provided by almost 4,000 graduates of the participating programs.

Each participating school appoints a coordinator who sends the questionnaires to the appropriate graduates each year. Completed questionnaires are then forwarded to NTID for analysis and returned to the individual school together with summary information on the graduates of all the participating schools[1]. Obviously, information from and about individual graduates and their school remains confidential

[1] *Considerably more detail is contained within each year's annual report prepared for the participating schools by the project coordinator, Janet MacLeod-Gallinger.*

Each year deaf adults who have graduated 1, 3, 5, 10, and 20 years prior to the survey are sent questionnaires For example, in 1986 efforts were made to locate and contact the graduating classes of 1985, 1983, 1981, 1975 and 1965. This sampling procedure permits periodic followup of graduates without the necessity of asking them to complete the questionnaire each year

FINDINGS

This paper limits itself to presenting information from deaf high school graduates approximately one year and ten years after their graduation from high school. The findings could be organized in numerous ways. For this paper we have chosen to report on

(i) postsecondary educational activities of high school graduates,
(ii) labor force and employment status of these graduates,
(iii) their occupations and earnings,
(iv) the influence of postsecondary education

Continuation of education beyond the secondary level

Table 1 indicates the percentage of graduates of the participating schools who have or have not enrolled in some form of postsecondary education within one year and any time within ten years of graduation from high school

Table 1. Percentage of deaf students who enroll in postsecondary education within one and ten years of high school graduation.

POSTSECONDARY EDUCATION	PERCENTAGE OF HIGH SCHOOL GRADUATES	
	AFTER ONE YEAR	AFTER TEN YEARS
ENROLLED	39.4%	48.7%
NOT ENROLLED	60.6%	51.3%

These percentages are indicative of a tremendous increase since the 1950's in access to postsecondary education by deaf high school graduates. It is estimated that about 200 deaf students were enrolled in college nationally in 1945; 40 years later the estimated numbers had grown to over 8,000 (Rawlings and King, 1986). Today, within ten years of their graduation from

High school, approximately 50% of all deaf high school graduates will have participated in some form of postsecondary education.

Labor force and employment conditions for high school graduates

The Bureau of Labor Statistics classifies all persons 16 years of age or older in the U.S. as being either in the labor force or out of the labor force. Persons are considered to be in the labor force if they are employed or currently looking for work, and out of the labor force if they are not currently working and have not looked for a job in the last four weeks.

Table 2 presents summary labor force circumstances, including employment and unemployment rates, of deaf high school graduates one and ten years after graduation (inclusive of both those who have and who have not continued their education beyond the secondary level).

Table 2. Labor force circumstances of deaf high school graduates one and ten years after graduation.

LABOR FORCE STATUS	YEARS FROM GRADUATION	
	ONE	TEN
IN THE LABOR FORCE	51.7%	81.6%
EMPLOYED	46.0%	88.5%
UNEMPLOYED	54.0%	11.5%
OUT OF THE LABOR FORCE (student, homemaker, etc.)	48.3%	18.4%

Among deaf graduates one year out of high school 51.7 percent were in the labor force. Of all those in the labor force, 46.0 percent were employed while 54.0 percent were unemployed.

Similar statistics for the hearing population[2], age 20 and 21, yield an 82.7 percent labor force participation rate, and an unemployment rate of 15.7 percent. We see a considerably higher labor force participation rate, and a much lower unemployment rate within the hearing young adult population

[2] *All comparative statistics are from publications of the U.S. Bureau of Labor Statistics.*

than among young deaf people. Certainly these figures indicate that many young deaf high school graduates have difficulty entering the work force of the United States

Ten years after graduation the picture changes considerably Comparison of the data in Table 2 representing one year after graduation with data representing ten years after graduation reveals that the labor force status of deaf adults out of high school for ten years and approaching 30 years of age improves considerably. Almost 82 percent of the adults ten years out of high school have now joined the labor force (including many who had been in college and out of the labor force nine years earlier). Most important, the unemployment rate has dropped dramatically, from 54.0 percent to 11 5 percent.

Among the hearing population of the U.S., ages 25 to 34, over 80 percent are in the labor force and the unemployment rate is under 5 percent. These comparison figures are a reminder that even though differences are less ten years later than immediately after high school graduation, deaf people as a group still do not approach parity in labor force participation and employment with the hearing population.

Occupations and earnings

Considerable information is available about the occupations of deaf high school graduates. For the purposes of this paper we shall merely distinguish between "blue collar" and "white collar" jobs.

Earnings are deceptively difficult to obtain and present accurately The questionnaire asks for weekly rather than annual earnings for several reasons of little consequence for this paper. It should be noted, however, that there is some risk in simply multiplying weekly earnings by 52 to arrive at an estimate of annual salary for the reason that many hourly wage earners do not have continuing employment throughout the year.

Table 3 indicates the proportion of blue and white collar jobs together with weekly earnings, reported by employed high school graduates one year and

ten years out of high school. One year after graduation, young deaf adults are employed predominantly in traditional blue collar jobs (70.9 percent) and report earning an average of $154 43 a week. These figures can be compared to figures available for hearing persons of a similar age, 50% of whom hold blue collar jobs and whose weekly earnings are $232 00

Ten years after high school graduation, the numbers of blue and white collar jobs held by deaf adults are approximately equal in proportion. Weekly earnings at $337.63 have more than doubled over the earnings one year out of high school.

Much of this growth in occupational level and increase in earnings is undoubtedly due to the increased earnings associated with time and experience in employment. However it should also be remembered that most men and women who were not in the labor force one year out of high school because they were in college, have since become employed and have influenced the occupational level and earnings of the group as a whole

Table 3. Proportion of blue and white collar occupations, and weekly earnings of employed young deaf adults one and ten years after high school graduation.

EMPLOYMENT CHARACTERISTIC	YEARS FROM GRADUATION	
	ONE	TEN
BLUE COLLAR JOBS	70.9%	47 2%
WHITE COLLAR JOBS	29.1%	52 7%
WEEKLY EARNINGS* (before deductions)	$154.43	$337.63

Adjusted to 1986 dollars using Consumer Price Index

Among the employed hearing population of the United States, ages 25 to 34, 58 percent are employed in white collar occupations and overall earnings average $382.61 a week. While the occupational and earnings differences between the employed hearing population and employed deaf persons ten years after graduation are not as severe as differences one year after graduation, a discrepancy does persist

Influence of postsecondary education

Published statistics (Bureau of the Census, 1986) indicate that achievement of a college degree positively influences employment rate, occupational level and earnings. Since the statistics reported for ten years from graduation in Table 1 include a large proportion of deaf individuals who had some college background[1] it is worth investigating the effect of college on labor force status and earnings.

To do this we have grouped responses by individuals (1) not attending college, (2) those receiving certificates, diplomas or associate degrees, and (3) those individuals achieving a bachelor's or higher degree.

From Table 4 it can be observed that high school graduates who did not attend college have higher unemployment rates, are employed in blue collar jobs more often and earn significantly less than those completing degree programs. From Table 4 it is clear also that there are significant economic gains to be realized from achieving a college degree.

Table 4. Labor force characteristics of deaf high school graduates ten years after graduation by degree earned.

VARIABLE	H.S. ONLY	CERT./DIP. ASSOC.	BACHELOR
IN THE LABOR FORCE	77.6%	83.3%	90.0%
EMPLOYED	82.1%	90.8%	95.2%
UNEMPLOYED	17.9%	9.2%	4.8%
BLUE COLLAR JOB	66.9%	39.1%	8.6%
WHITE COLLAR JOB	33.1%	60.9%	91.4%
WEEKLY EARNINGS*	$302.73	$360.07	$401.39

*Adjusted to 1986 dollars using Consumer Price Index

The reader, however, must be cautioned against attributing these gains only to the influence of college. Variables such as achievement, level of hearing loss, presence of multiple handicaps, parental socio-economic status, gender, etc. also exert considerable influence on occupational attainments. The

[1]Forty-nine percent of the high school graduates reported taking some college courses during the ten years since graduation.

authors stress that the effects of these "other" variables are not controlled in the findings presented in Table 4 There is a need for further research to determine the contribution of these variables (including college) to the occupational attainments of deaf high school graduates

Hearing persons who have not attended college have a nine percent unemployment rate, 50 percent employment in blue collar occupations and average weekly earnings of $319 33, better overall statistics than for deaf high school graduates. Deaf degree recipients have rates similar to those of hearing persons in unemployment and participation in white collar occupations but considerably reduced earnings when compared with hearing persons Hearing recipients of sub-baccalaureate degrees earn an average of $415.27 per week compared to $360.07 for deaf graduates, and for baccalaureate recipients hearing graduates earn $643.61 compared to $401.39 per week for deaf baccalaureates This difference is considerable and may suggest problems of upward job mobility on the part of deaf college graduates.

CONCLUSIONS

In some respects information about the most recent high school graduates has more relevance to the high schools from which they graduate than information about their more distant graduates. The school's influence on the recent graduate is more apparent and less diluted by other major influences that follow high school graduation and the assumption of an adult role.

The most striking observation to be made in connection with the recent deaf high school graduate is that the decision about whether to continue his or her education at the postsecondary level, or to enter the labor force directly, is of major significance to the graduate's future occupational status, employment security, and earnings.

In view of the accessibility of postsecondary education in some form or another to most deaf high school graduates today, and the variety of career and program choices available, a postsecondary education should be considered a reasonable aspiration and attainment for most deaf high school graduates.

There are many things the school (and the family) can do to foster the student's interest and preparation for college

However, the responsibility of the school is at least as great for the high school student who cannot, or chooses not to continue his or her education, as for the college-bound student. The transition from high school to the world of work is likely to be difficult for this graduate, as evidenced by the large proportion of such graduates who are unemployed, and others who are neither in college nor in the labor force. These findings suggest the crucial need for transitional programming to improve the employability of the non college-bound student.

While increased support by way of vocational counseling, training and placement would certainly help, we cannot lose sight of the fact that collectively these young adults continue to have measured achievement levels of 4th and 5th grade levels and below (Allen, 1986). Any proposed solutions need to include major attention to quality vocational training and placement, and a long term goal of increasing and overall achievement level, inclusive of literacy, among deaf students graduating from high school

We need to think about educating deaf students witnin the context of changes taking place in the American workplace. Several decades ago America began to move from an industrially-based to a technically-based economy. Education of the deaf responded in large measure by creating new opportunities and expanding those already available for many more high school graduates to continue their education at the postsecondary level. The terms "career education" and "technical education" took on new meaning. Data from our high school graduates suggest that these efforts have been relatively successful.

But we are now talking about becoming an information and service-based economy. If this is so, we need to insure that deaf high school students are becoming prepared to enter a job market that expects sophistication both in technology and in communication. We are optimistic that this can indeed occur if the curricula of elementary, secondary and postsecondary programs truly complement each other.

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