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ABSTRACT

The study examined factors related to short and long-term employment outcomes for 320 adults with four major handicapping conditions (learning disabilities, mental retardation, emotional handicaps, and other handicaps) who participated in an industry-based rehabilitation program. Clients, who were placed in competitive employment over the past 10 years, responded to a phone or mail survey regarding their current employment and recent job history. Results showed that the industry-based rehabilitation model achieves its goal of competitive employment for handicapped participants (72% were currently employed at short-term followup and 70% were employed at long-term followup). Despite a significant relationship between type of handicap and current employment status, the majority of clients in all four handicapped groups were competitively employed 1-10 years following placement. The 10 client variables examined in the study did not significantly predict successful employment outcomes at long or short-term followup or for any of the handicapped groups with one exception: employer ratings of clients after 1 month on the job were significantly related to successful employment outcomes for the learning disabled group. (Author/CL)

Final Report

FACTORS RELATED TO SHORT- AND LONG-TERM EMPLOYMENT OUTCOMES FOR HANDICAPPED PARTICIPANTS IN AN INDUSTRY-BASED REHABILITATION PROGRAM

A Study Supported by the Mary E. Switzer Fellowship Program
National Institute of Handicapped Research

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BOARD OF COOPERATIVE EDUCATIONAL SERVICES OF NASSAU COUNTY

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FACTORS RELATED TO SHORT- AND LONG-TERM EMPLOYMENT OUTCOMES FOR HANDICAPPED PARTICIPANTS IN AN INDUSTRY-BASED REHABILITATION PROGRAM

Final Report

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Mary E. Switzer Fellowship Program

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Preface

I wish to thank the Nassau BOCES Board of Education for their approval to conduct this study and the many individuals at BOCES who helped make this study possible: Dr. Charles W. Colangelo and Mr. Philip Archer of Central Administration for their encouragement and support throughout the project, Mr. Aaron Schaeffer, Ms. Edda Hellerbach and Ms. Eleanor Reynolds, from the Division of Occupational Education, for their approval and cooperation, and especially the staff of the Industry-Based Program for their assistance: Ms. Leslie Klein, Ms. Laurie Harris, Ms. Cynthia Illicette, Ms. Denise Simonetti-Marcel, Mr. Vincent Russo and Ms. Shelley Tankleff. My thanks also to Dr. Frank Crowley from the Data Processing Center for statistical consultation, Ms. Janie Girolamo and Dr. Diane Schneider for their assistance in data collection and data analysis, and Ms. Iris Lawyer, Ms. Aurora Collins and Ms. Ellen Magistro, from the Office of Institutional Planning and Research, for secretarial assistance.

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ABSTRACT

Factors Related to Short- and Long-Term Employment Outcomes
For Handicapped Participants in an Industry-Based Rehabilitation Program

December, 1984

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This study examined factors related to short- and long-term employment outcomes for adults with four major handicapping conditions who participated in an industry-based rehabilitation program. A sample of 320 clients, who were placed in competitive employment over the past ten years, responded to a phone or mail survey regarding their current employment and recent job history.

The results showed that the industry-based rehabilitation model does achieve its goal of competitive employment for handicapped participants. Seventy-two percent of the respondents were currently employed at short-term follow-up and 70% were employed at long-term follow-up. Although there was a significant relationship between type of handicap and current employment status, the majority of clients in all four handicapped groups were competitively employed one to ten years following placement.

Those clients who returned to the program for placement assistance were not significantly different regarding employment outcomes than those who did not return for help; the majority of both groups were employed at follow-up. An inspection of the data indicated that those with certain types of handicapping conditions did benefit from additional placement assistance. The ten client variables examined in this study did not significantly predict successful employment outcomes at long- or short-term follow-up or for any of the handicapped groups with one exception; employer ratings of clients after one month on the job were found to be significantly related to successful employment outcomes for the learning disabled group.

I. INTRODUCTION

Competitive employment is a major rehabilitation goal for handicapped adults. Yet, according to the Department of Education's Office of Special Education and Rehabilitative Services (1984), between 50 to 80 percent of working age adults who report a disability are jobless.

Industry-based rehabilitation programs appear to be a promising approach to achieving the goal of competitive employment for the handicapped and these programs are receiving considerable federal support. The Jobs Bill, which was enacted as P.L. 98-8 on March 24, 1983, includes a supplemental appropriation of $5,000,000 for the Projects With Industry program. However, little research has been available on the employment outcomes of industry-based programs, especially long-term outcomes.

In fact, few longitudinal studies of employment outcomes have been done for any type of rehabilitation effort. One follow-up of 26 state rehabilitation agencies (Bailey,1965) reported employment outcomes of large samples of disabled adults at one to ten years following placement. This report concluded that competitive employment was maintained with the passage of time. Although the data were in the direction of a lower employment rate over time, it appeared that stable vocational adjustments were achieved.

Some recent studies by Wehman and Hill and by Hillsman, Weinglass and Silberman (cited in Leavitt, 1984) have shown that training at the work site is a promising approach for the mentally retarded. In a study of 63 mentally retarded adults who were placed by Project Employability in competitive employment, Wehman and Hill found that 67 percent were still employed five to ten months later. In a recent follow-up report on this project, Shafer (1984) reported that 66 percent were employed two years after placement; only 22 percent were still employed at the original placement site indicating that while the initial placement may end in failure, generally the individual can succeed in a

second placement. The Hillsman et. al. study of mentally retarded adults compared outcomes of randomly assigned project participants in a Projects With Industry program to a control group which received no placement assistance. Eighteen months after referral to Job Path, 72 percent of the participants had nonsubsidized jobs compared to 42 percent of the control group.

However, no industry-based rehabilitation studies were identified that compared the employment outcomes for different handicapping conditions. Also, none examined the client factors that might contribute significantly and predict successful unemployment outcomes of an industry-based rehabilitation program.

A review of the literature on predicting successful and unsuccessful rehabilitation outcomes (Sankovsky, 1968), largely focused on predicting completion of rehabilitation training programs and not on employment outcomes. This review found contradictory findings regarding such factors as sex, age at referral, educational level and type of disability. The evidence did suggest that those disabled prior to age 30 were more likely to be successfully rehabilitated and that the emotionally disabled are typically less successful as rehabilitation clients. The studies reviewed also indicated that degree of disability is significantly related to rehabilitation outcomes, though the author cautions that degree of disability is a poorly defined variable and that client's motivation tends to cloud any true assessment of ability.

The purpose of this study was to examine factors related to short- and long-term employment outcomes for adults with four major handicapping conditions who participated in an industry-based rehabilitation program. Specific goals and objectives are described below.

Goals and Objectives

The first goal of this research study was to determine if the industry-based rehabilitation model works, that is, whether handicapped participants in the program retain competitive employment several years after leaving the program, and whether type of handicap is related to

employment outcomes. If there is a relationship between type of handicapping condition and short- and long-term employment outcomes, certain types of handicapped adults may not be as appropriate for industry-based rehabilitation as others or they may require more follow-up support in order to retain competitive employment.

Another goal was to determine whether the "open-door" policy, a special feature of the Nassau BOCES Industry-Based Program, is related to successful employment outcomes, and whether it is especially beneficial to those with certain types of handicaps. The "open-door" policy means that a participant in the program may return at any time to seek additional industry-based training and job placement assistance; if the "open-door" policy is effective with handicapped adults, this could be a process utilized by other industry-based projects.

The third goal of this research effort was to identify client factors that predict and contribute to successful employment outcomes for the handicapped as well as to determine what factors predict employment outcomes for participants with different types of handicaps. This information might be useful to rehabilitation counselors for improving vocational assessment, job placement and post-employment follow-up services. Successful job placements may have the additional benefits of greater employer satisfaction with handicapped employees and an improved self-concept for the handicapped client. Furthermore, the identification of the predictor variables for different handicapped groups might enable a rehabilitative program to identify the needs of each handicapped group and plan a program which would satisfy those needs, thus individualizing the treatment.

Specifically, this study had three objectives:

Objective 1: To determine if the industry-based rehabilitation model achieves its goal of competitive employment for handicapped participants at short- and long-term follow-up and whether type of handicap is related to employment outcomes.

Objective 2: To determine whether the "open-door" policy (continuous assistance offered by the Nassau BOCES Industry-Based program) is significantly related to long-term employment outcomes

and whether this policy is especially beneficial to those with certain types of handicaps.

Objective 3: To determine what factors contribute significantly and predict successful employment for handicapped adults who participated in an industry-based rehabilitation program and to determine the best predictors of employment for different types of handicapping conditions.

Background of Study and Projects With Industry

The setting for this study was the Nassau BOCES (Board of Cooperative Educational Services) Projects With Industry (PWI) program. Nassau BOCES received federal funding for a model PWI program in 1982. This model program was based on and expanded a successful industry-based training program that began with VEA funding in 1973. In the past ten years, this program made over 1000 competitive job placements. The extensive client data offered an opportunity to follow-up participants in the program to determine the extent to which these participants retained competitive employment at short- and long-term follow-up.

The Projects With Industry (PWI) program was authorized by the 1968 amendment to the Vocational Rehabilitation Act. Projects With Industry involve the private sector in the rehabilitation process and provide job placement, on-the-job training and support services to help disabled adults acquire paid employment. Projects With Industry is not really a set model as PWI programs do vary, having a wide range of approaches and activities. Three types of models include: (1) job placement characterized by client selection and supportive services; (2) work adjustment with time-limited work experience to help clients improve work attitudes and behavior and (3) skills training (Wright, 1980).

The BOCES PWI program incorporates all three of these models. Over the past ten years, this industry-based program has evolved into a highly complex model involving assessment, skills training, work experience at the program site, on-the-job training and ongoing evaluation. A description of the program and an outline of the project model is presented in Appendix A.

II. METHOD

Sample

The study began in the fall of 1983. Lists of all clients, who were placed in competitive employment and remained on the job for two or more months, were obtained for each year of the program, from 1973 to 1983. A total of 746 clients were identified.

The total population was then divided into four time waves (Time Wave I, placements made 6 to 10 years ago, from 1973 to 1977; Time Wave II, placements made 3 to 6 years ago, 1977 to 1980; Time Wave III, placements made 2 to 3 years ago, 1980 to 1982; and Time Wave IV, placements made one year ago, 1982 to 1983) and four major handicapping conditions (mentally retarded, learning disabled, emotionally handicapped, and "other", which included physical, speech, hearing, visual, medical, epileptic and multiple (three or more) handicapping conditions). The major handicapping condition of each client was determined from the client's file.

A stratified random sample of 400 clients was drawn with 25 from each major type of handicap for each time wave. For those who had moved (mail returned, phone disconnected), replacements were randomly drawn from the same time wave and major handicapping condition which resulted in a total sample of 529 clients or 71% of the total population. The 320 handicapped adults who responded to the follow-up survey made up the final sample, a response rate of 61% of the total sample and a response rate of 80% of those who were assumed to have received the mailed survey. Three percent (11 clients) refused to answer and 17% (69) did not respond by mail and were not able to be reached at home by phone (no answer, client not at home, etc.).

Table 1 presents the number of respondents for each time wave and major handicapping condition. The long-term follow-up group consisted of 252 respondents, 89 from Time Wave I, 69 from Time Wave II, and 94 from Time Wave III. The short-term group, Time Wave IV, consisted of 68 respondents. The four major handicapped groups consisted of 87 mentally retarded respondents, 73 learning disabled, 79 emotionally handicapped and 81 with other handicapping conditions, (24 physical, 18 medical including epilepsy, 15 speech/hearing or visual impairments and 24 multiply handicapped).

TABLE 1

SAMPLE DISTRIBUTION BY TIME WAVE AND MAJOR HANDICAP

(N=320)

	Time Wave (Year Placed)				
Major Handicap	I 1973-77 N=89	II 1977-80 N=69	III 1980-82 N=94	Long-term Total 1973-82 N=252	Short-term IV 1982-83 N=68
MR N=87	25 28%	20 29%	23 25%	68 27%	19 28%
LD N=73	25 28%	13 19%	22 23%	60 24%	13 19%
EH N=79	21 24%	19 28%	23 25%	63 25%	16 24%
Other N=81	18 20%	17 25%	26 29%	61 24%	20 29%

The sample was fairly evenly divided between males and females; a little over half of the respondents were males (55%). The respondents ranged in age from 18 to 70 years, with a mean age of 29.37; about two-thirds of the respondents were in their twenties. Almost two-thirds of the sample (63%) had high school diplomas or high school equivalency diplomas, one-fourth had less than a high school diploma and 14% had attended college with one percent having college degrees. Frequencies of these and other demographic variables are presented in Appendix B.

Instrumentation

A brief job history questionnaire was developed for this survey with help from program staff and methods suggested by Dillman (1978). This instrument has two parts, an 11 item forced-choice questionnaire and an open job history form similar to those required for job applications (See Appendix C); it was pilot tested with 10 handicapped adults who were working at the program site. Background information was obtained from individual client files kept by the program and coded on a Summary Data Form (Appendix C); information obtained from the files included: gender, type of handicap, birth date, educational and training background, employment history prior to program, availability of transportation, counselor ratings, job placements made by the program, and employer ratings.

Procedure

The Job History Questionnaire, a letter explaining the purpose of the study and a stamped return envelope were sent to the entire sample between January and August, 1984, starting with Time Wave I. A phone call was made approximately two weeks later to those who had not returned the questionnaire and a phone interview was requested; repeated attempts were made to reach those who were not home. Of the total responses, 28% were obtained by mail and 72% by phone interview. Data on all background variables was then obtained from the clients' files and recorded on the Summary Data Form. All information was coded and prepared for keypunching and computer analysis.

Research Design and Methodology

Research Question 1: The main purpose of Research Question 1 was to determine if participants in an industry-based rehabilitation program were competitively employed at short- and long-term follow-up and whether there was a difference in employment outcomes for groups with different types of handicaps.

The entire sample (N=320), consisting of four time waves, was used to determine employment outcomes at short- and long-term follow-up. Data for all variables was obtained from either the Job History Questionnaire administered to clients at follow-up or from information in clients' files which are kept by the BOCES Industry-Based Program.

A comparison group design was utilized to determine if there were significant differences in employment outcomes for groups with different types of handicaps at short- and long-term follow-up. A 4 (Time Wave) by 4 (Major Type of Handicap) analysis of variance was used to determine if differences between the groups and interactive effects were statistically significant.

The independent variables were (1) major type of handicap with four types of handicapping conditions (mentally retarded, learning disabled, emotionally handicapped and other handicapping conditions) and (2) time wave, length of time since placement by rehabilitation program (Time Wave I, placements made six to ten years ago, 1973-1977; Time Wave II, three to six years ago, 1977-1980; Time Wave III, two to three years ago, 1980-1982; and Time Wave IV, placements made one year ago, 1982-1983). The dependent variable was the client's percent time employed over the past 12 months for the short-term group (Time Wave IV) and percent time employed over the last 24 months for the long-term group (Time Waves I, II and III).

Information for the independent variables (handicapping condition and job placement date) was obtained by examining the client's records and recording the information on the Summary Data Form (Appendix C). The dependent variabe was calculated from responses to the survey's Job History Questionnaire regarding dates of current and past jobs.

Descriptive statistics were also obtained regarding current employment status, i.e., whether respondents were employed at the time he/she responded to the survey. Current employment was examined by competitive versus sheltered employment, time wave, major handicap, gender, skill level and salary.

Research Question 2: The purpose of this research question was to determine if there were differences in employment outcomes for those who returned to the program for additional placement assistance versus those who did not return and whether the open-door policy (continuation of placement support) was more helpful for those with certain types of handicapping conditions.

Only the long-term sample was used for this aspect of the study as returns to the program were more likely to have occurred after a one-year period. The long-term sample consisted of 253 respondents from Time Waves I, II and III, those placed in jobs by the rehabilitation program two to ten years ago. Those who had never been out of work and therefore did not have a need for further placement assistance (N=72) were excluded from the analysis and most of the descriptive tables.

To determine if there were differences in employment outcomes for those who returned to the program for another placement when out of work versus those who did not, and whether there were differences for those with different types of handicaps, a 2 (Responsiveness to Open-Door Policy) by 4 (Major Handicapping Condition) analysis of variance was selected.

The independent variable, responsiveness to open-door policy, had two levels: 1) returned and 2) did not return. This variable was determined by a forced-choice questionnaire item (Q5) on the Job History Questionnaire (Appendix C), which asked respondents "Have you ever been out of work and returned to the BOCES Industry-Based Program for help?" Respondents were given the option of

answering: 1. Yes, 2. No, never out of work, or 3. No, out of work but did not return, please explain why. Those who reported never being out of work were excluded from the analysis. The other independent variable, major handicap, and the dependent variable, months employed over the past two years, were the same variables used for Research Question 1.

Descriptive statistics were also examined regarding current employment status and type of handicap for those who returned to the program versus those who did not return.

Research Question 3: The main purpose of Research Question 3 was to determine what factors contribute significantly and predict successful employment for handicapped adults who participated in an industry-based rehabilitation program at short- and long-term follow-up.

Separate multiple regression analyses were performed for the short- and long-term samples and also for each type of handicapping condition. The criterion variable was the same as the dependent variable for prior research questions, client's number of months employed over the past 12 months for the short-term follow-up and over the past 24 months for the long-term follow-up. The 10 predictor variables included: type of handicapping condition, age, gender, educational level, skill level of training, longest prior job (in weeks), availability of transportation, counselor interview and skill-rating, skill level of last job, skill level of job placement (by program), and employer ratings at one-month on the job.

III. RESULTS

EMPLOYMENT OUTCOMES: RESEARCH QUESTION 1

Employment Outcomes by Time Wave and Type of Handicap

A 4 (Time Wave) by 4 (Major Type of Handicap) analysis of variance was used to determine if differences between the groups and interactive effects were statistically significant at the .05 level.

The dependent variable was the client's percent time employed over the past 12 months for the short-term group (Time Wave IV) and percent time employed over the last 24 months for the long-term groups (Time Waves I, II and III). Since percentages are not normally distributed and not advisable for use in a parametric type test, an arcsine conversion converted the proportions of months employed to angles which are normally distributed. Table 2 presents the converted means which reflect the magnitude of the proportion of the months employed. Tables showing the actual mean months employed and percent months employed are presented in Appendix D.

TABLE 2

*CELL MEANS: EMPLOYMENT OUTCOMES AT LONG- AND SHORT-TERM FOLLOW-UP BY TYPE OF HANDICAP

	Type of Handicap				
Time Wave	MR N=86	LD N=71	EH N=77	OTHER N=81	GROUP MEAN N=315
Long-term I (1973-77) N=88	1.06	1.32	.93	1.13	1.12
II (1977-80) N=88	.86	1.06	.70	.91	.86
III (1980-82) N=91	1.05	1.01	.81	.82	.92
Short-term IV (1982-83) N=68	1.37	1.42	.88	1.18	1.21
Group Mean	1.08	1.20	.83	1.00	1.03

*An arcsine conversion was used to convert the proportions of months employed to angles which are normally distributed.

Table 3 presents the sum of squares table for the analysis of variance. Both main effects, time wave and major handicap, were significant at the .05 level. A post hoc Scheffé test was used to test for significance at the .05 level between the handicapped groups and the time waves.

TABLE 3
TIME WAVE, MAJOR HANDICAP AND EMPLOYMENT OUTCOMES
ANALYSIS OF VARIANCE

Source of Variation	df	Mean Square	F
Main Effects			
Time Wave	3	1.84	4.96*
Major Handicap	3	1.70	4.59*
2-Way Interactions	9	.18	.48
Explained	15	.84	2.27
Residual	299	.37	
Total	314	.39	

p<.05

The Scheffé test showed a significant difference between the learning disabled group and the emotionally handicapped group, but not between any of the other handicapped groups. As shown in Table 2, means for the four handicapped groups ranged from .83 for the emotionally handicapped group to 1.20 for the learning disabled group; the mentally retarded group with a mean of 1.08 and the "other" handicapped group with a mean of 1.00 were very close to the overall group mean of 1.03. The results indicated that the learning disabled group had the highest percent employment over the time studied and the emotionally disturbed group had the lowest percent employment. The learning disabled group differed significantly from the emotionally handicapped group, but did not differ significantly from the mentally retarded or "other" handicapped group. The emotionally

disturbed group, the mentally retarded and the "other" group were not significantly different from one another.

The Scheffé test revealed a significant difference at the .05 level between Time Wave IV (the short-term group) and Time Wave II, but no significant differences between any of the other time wave groups. The group means for the four time waves ranged from .86 for Time Wave II to 1.21 for Time Wave IV. Time Wave I had a mean of 1.12 and Time Wave III a mean of .92. The results indicated that the short-term group, Time Wave IV, had a significantly higher percent employment over the 12 months since placement than Time Wave II had over the last 24 months. However, the short-term group did not differ significantly from the other two long-term groups (I, III) and the three long-term groups did not differ significantly from each other.

Number of Months Employed at Follow-Up by Time Wave and Major Handicap

The variable, months employed, was divided into four categories to show the frequency distribution of clients for months employed over the two-year period prior to the follow-up survey. Table 4 presents the number of months clients were employed at follow-up for the time waves. The maximum months employed were 12 months for short-term follow-up and 24 months for long-term follow-up.

TABLE 4

NUMBER OF MONTHS EMPLOYED AT LONG- AND SHORT-TERM FOLLOW-UP

(N=313)

	Time Wave (Year Placed)				
Months Employed	I 1973-77 N=88	II 1977-80 N=67	III 1980-82 N=91	Long-term TOTAL 1973-82 N=246	Short-term IV 1982-83 N=67
0 to 5 mos.	19 22%	21 31%	17 19%	57 23%	10 15%
6 to 12 mos.	5 6%	5 8%	13 14%	23 9%	57 85%
13 to 18 mos.	4 4%	8 12%	17 19%	29 12%	not applicable*
19 to 24 mos.	60 68%	33 49%	44 48%	137 56%	not applicable*

*The short-term group was followed up at one year after placement; the maximum months employed for this group was 12 months.

For the short-term group (Time Wave IV), most of the respondents (85%) had been employed 6 to 12 months at one-year follow-up (two-thirds of the group had been employed for the entire year). For the three long-term time waves, over half of the respondents (56%) had worked 19 to 24 months over the past two years: 68%, 49%, 48% for Time Waves I, II and III respectively; one-fourth had been employed 0 to 5 months: 22%, 31% and 19% for Time Waves I, II and III respectively. The remaining fourth had worked between 6 and 18 months out of the last two years. The results showed that over half of the respondents established stable employment patterns and were likely to be employed most of the time.

Table 5 presents the number of months employed over the last two years for each of the four major types of handicapping conditions at long-term follow-up (Time Waves I, II and III). The amount of time employed was distributed fairly evenly across handicapping conditions for each of the four time categories. An examination of the cell distribution shows that the learning disabled group had the highest percentage employed for 19 to 24 months (67%) and the emotionally handicapped group had the lowest percentage in the 19 to 24-month category (43%).

TABLE 5

MONTHS EMPLOYED OVER LAST TWO YEARS BY MAJOR HANDICAP
LONG-TERM FOLLOW-UP

	Major Handicap				
Months Employed	MR N=67	LD N=58	EH N=61	OTHER N=61	TOTAL N=247
0 to 5 mos.	13 19%	9 16%	18 29%	17 28%	57 23%
6 to 12 mos.	5 8%	5 9%	9 15%	4 7%	23 9%
13 to 18 mos.	10 15%	5 9%	8 13%	7 11%	30 12%
19 to 24 mos.	39 58%	39 67%	26 43%	33 54%	137 56%

Current Employment Status and Competitive Versus Sheltered Employment

Current employment status, whether the respondent was working or not at the time she/he responded to the survey, was examined for the total sample at short- and long-term follow-up. Competitive versus sheltered employment was also examined for the total sample.

As shown in Table 6, over two-thirds (70%) of the total sample (N=320) were currently employed in full- or part-time positions at follow-up, one to ten years following placement by the industry-based rehabilitation program. Over half (53%) of the respondents held full-time jobs and 17% were employed part-time. Of the respondents who were currently employed, five percent were in sheltered workshops and 95% were in competitive employment (jobs open to nonhandicapped and handicapped); 72% worked in for-profit companies and 23% worked in not-for-profit agencies.

TABLE 6

CURRENT EMPLOYMENT STATUS AND COMPETITIVE VERSUS SHELTERED EMPLOYMENT

(N=320)

Not Employed	95	30%
Total Employed	225	70%
Employed full-time	(171)	(53%)
Employed part-time	(54)	(17%)
Sheltered Employment	11	5%
Competitive Employment	214	95%
For-profit companies	(162)	(72%)
Not-for-profit	(52)	(23%)

Current Employment Status by Time Wave and Major Handicap

Table 7 presents the current employment status for each of the four time waves and a total for the long-term group (Time Waves I, II and III) which can be compared to the short-term group (Time Wave IV). About three-fourths of those placed 6 to 10 years ago (Time Wave I) and those placed one year ago (Time Wave IV) were currently employed in full- or part-time jobs compared to about two-thirds of Time Waves II and III.

TABLE 7

CURRENT EMPLOYMENT STATUS AT LONG- AND SHORT-TERM FOLLOW-UP

(N=320)

	Time Wave (Year Placed)				
	I 1973-77 N=89	II 1977-80 N=69	III 1980-82 N=94	Long-term Total 1973-82 N=252	Short-term IV 1982-83 N=68
Not Employed	22 25%	24 35%	30 32%	76 30%	19 28%
Employed Full-Time	59 66%	28 41%	51 54%	138 55%	33 49%
Employed Part-Time	8 9%	17 25%	13 14%	38 15%	16 23%
Total Employed	67 75%	45 65%	64 68%	176 70%	49 72%

($\chi^2(6)=14.82, p<.05$)

A chi square statistic was computed and a significant relationship was found between current employment and time wave. An examination of Table 8 shows that Time Wave I had the highest percentage of full-time workers (66% compared to 41% of Time Wave II, 54% of Time Wave III, and 49% of Time Wave IV), and the lowest percentage of part-time workers (9%). The total long-term group did not differ much from the short-term group regarding total percent employed (70% vs. 72%) or full-time workers (55% vs. 49%).

Table 8 presents the current employment status by type of handicap (MR, LD, EH, Other) for the combined four time waves. A chi square statistic was computed and a significant relationship was found for type of handicap and current employment status ($X^2(6) = 13.24$, $p < .05$).

TABLE 8

CURRENT EMPLOYMENT STATUS BY MAJOR HANDICAP
(LONG- AND SHORT-TERM FOLLOW-UP)

	Major Handicap				
Current Employment	MR N=86	LD N=73	EH N=79	OTHER N=81	TOTAL N=319
Not Employed	26 30%	14 19%	27 34%	27 33%	94 30%
Employed Full-Time	39 45%	47 64%	38 48%	47 58%	171 54%
Employed Part-Time	21 24%	12 16%	14 18%	7 9%	54 17%
Total Employed	60 70%	59 81%	52 66%	54 67%	225 70%

($X^2(6)=13.24, p<.05$)

An examination of Table 8 shows that 19% of those classified as learning disabled were not employed compared to about one-third of the mentally retarded (30%), emotionally handicapped (34%), and the "other" handicapped group (33%). The learning disabled group had the highest percentage of full-time workers (64%) with the "other" handicapped group being the next highest (58%). The mentally retarded group had the highest percentage of part-time workers (24%). The results indicated that the learning disabled group had more employed in full time positions than the other three handicapped groups.

Current Employment Status and Gender

Current employment status for males and females at follow-up (long-term and short-term groups combined) is shown in Table 9. About one-third of the female respondents were unemployed at follow-up compared to one-fourth of the males; 61% of the males versus 44% of the females were employed full-time. More females (21%) than males (.4%) had part-time jobs. A chi square statistic was computed and a significant relationship at the .05 level was found regarding current employment and gender ($X^2(2) = 8.69$, $p < .05$). The results indicate that males were more likely than females to be employed and in full-time positions.

TABLE 9

CURRENT EMPLOYMENT STATUS AND GENDER
(LONG- AND SHORT- TERM FOLLOW-UP)

	GENDER		
Current Employment	Males N=176	Females N=142	Total N=318
Not Employed	45 26%	49 35%	94 30%
Employed Full-Time	107 61%	63 44%	170 54%
Employed Part-Time	24 14%	30 21%	54 17%
Total Employed	131 74%	93 65%	224 70%

($X^2(2) = 8.689$, $p<.05$)

Skill Level of Current Job and Major Handicap

Information for determining the skill level of current job was obtained from the Job History Questionnaire which asked respondents about their current job titles and duties. The Dictionary of Occupational Titles (DOT) was used to find the DOT number for each

position. Then the skill level was determined by using the Office of Employment Statistics (OES) skill indicator in The Classification of Jobs According to Worker Trait Factors (Field & Field 1984). The OES skill indicator is defined as follows:

(1) skilled: jobs with a Specific Vocational Preparation (SVP) of 7-9
(2) semi-skilled: jobs with a SVP of 3-6
(3) unskilled: jobs with a SVP of 1-2

Table 10 presents the skill level of current job by major type of handicap. A chi square statistic was computed and a significant relationship was found between major type of handicap and the OES skill level ($X^2(6) = 20.59$, $p < .05$).

TABLE 10

OES SKILL LEVEL OF CURRENT JOB AND MAJOR HANDICAP

	Major Handicap				
Current OES Skill Level	MR N=58	LD N=58	EH N=47	OTHER N=54	TOTAL N=217
Skilled		4 7%	5 11%	6 11%	15 7%
Semi-Skilled	13 22%	24 41%	15 32%	27 50%	79 36%
Unskilled	45 78%	30 52%	27 57%	21 39%	123 57%

($X^2(6)=20.59, p<.05$)

An examination of Table 10 shows that the mentally retarded group had lower skill level jobs than the other three groups; none were in skilled positions, 22% were in semi-skilled positions and 78% were in unskilled positions. The "other" group which included medical, physical, speech, hearing and visual handicapping conditions as well as multiple handicaps has the most in semi-skilled jobs: 11% in skilled positions, 50% semi-skilled and 39% unskilled. Slightly over half of the emotionally handicapped and learning disabled groups

were in unskilled jobs; a few were in skilled positions and the remaining were in semi-skilled jobs (EH=32%, LD=41%).

Current or Last Salary

Salary of respondents is shown in Table 11. Almost half (47%) of those reporting current or last salary (N=269) were earning less than $130 a week or below minimum wage. Of the 53% earning more than minimum wage, 32% reported weekly salaries between $130 and $200, 17% were earning between $200 and $310, and 4% were earning between $311 and $770 a week. When salary was examined by major handicapping condition, the mentally retarded group was earning less than the other handicapped groups; only 11% of the mentally retarded group was earning over $200 a week compared to 21% of the EH group, 24% of the LD group and 29% of the "other" group.

TABLE 11
CURRENT OR LAST SALAR. AND MAJOR HANDICAP
MAJOR HANDICAP

Weekly Salary	MR N=75	LD N=59	EH N=67	OTHER N=68	TOTAL N=269
UNDER $130 WEEK	42 56%	19 32%	33 49%	33 49%	127 47%
$130-$200 WEEK	25 33%	26 44%	20 30%	15 22%	86 32%
$200-$310 WEEK	5 7%	11 19%	13 19%	16 23%	45 17%
$311-$790 WEEK	3 49%	3 5%	1 2%	4 6%	11 4%

OPEN-DOOR POLICY: RESEARCH QUESTION 2

Responsiveness to Open Door Policy and Major Handicap

Table 12 shows descriptive statistics for the long-term sample regarding responsiveness to the open-door policy (number who returned for help, did not return and never out of work) and major handicapping condition. A chi square statistic was computed and no significant differences were found. An examination of the table shows that responsiveness to the open-door policy is fairly evenly distributed across handicapping conditions.

Twenty-nine percent of the long-term sample had never been out of work since first placed on a job by the industry-based program. When this is examined by type of handicap, 29% of the mentally retarded (MR) had never been out of work compared to 37% of the learning disabled (LD) group, 23% of the emotionally handicapped (EH) and 28% of the "other" group. Almost half (49%) of the EH group did not return for help when unemployed compared to about one-third of the other three handicapped groups (MR=32%, LD=32%, Other=38%).

TABLE 12

RESPONSIVENESS TO OPEN-DOOR POLICY AND MAJOR HANDICAP
(Long-term Groups)

	Major Handicap				
Returns to Program	MR N=68	LD N=60	EH N=61	OTHER N=61	TOTAL N=250
Returned	26 38%	19 32%	17 28%	21 34%	83 33%
Did Not Return	22 32%	19 32%	30 49%	23 38%	94 38%
Never Out Of Work	20 29%	22 37%	14 23%	17 28%	73 29%

$X^2 = 9.38$, af = 9, NS)

Employment Outcomes: Responsiveness to Open-Door Policy and Type of Handicap

A 2 (Responsiveness to Open-Door Policy) by 4 (Major Handicap) analysis of variance was used to determine if there were significant differences between the groups or interactive effects regarding employment outcomes at long-term follow-up. The independent variable, responsiveness to open-door policy, had two levels: 1) returned and 2) did not return. Those who had never been out of work (N=73) were excluded from the analysis.

Table 13 presents the cell means of months employed over the past 24 months and responsiveness to the open-door policy by handicapping condition. The overall mean of those who returned for help was 13.66 versus a group mean of 12.65 for those who did not return. For three of the four handicapped groups (MR, EH, and "other"), the mean months employed for those who returned for help was slightly larger than for those who did not return.

TABLE 13

CELL MEANS: MONTHS EMPLOYED OVER PAST TWO YEARS
EMPLOYMENT OUTCOMES AND OPEN-DOOR POLICY

	Responsiveness to Open Door		
Major Handicap	Returned for Help N = 82	Did Not Return N = 91	Group Mean N = 173
MR	14.64	13.23	13.98
LD	15.84	16.50	16.16
EH	11.00	10.14	10.47
Other	12.67	12.13	12.39
Group Mean	13.66	12.65	13.13

Table 14 is the sum of squares table. No significant main effects or interactions were found at the .05 level. The results indicate that there were no significant differences regarding employment outcomes for those who returned to the program for help versus those who did not return. There were also no significant differences regarding employment outcomes for those with different handicapping conditions but this approached significance (p=.067).

TABLE 14

RESPONSIVENESS TO OPEN DOOR POLICY, MAJOR HANDICAP AND EMPLOYMENT OUTCOMES

ANALYSIS OF VARIANCE

Source of Variation	df	Mean Square	F
Main Effects			
Major Handicap	3	229.58	2.43
Responsiveness to Open Door Policy	1	15.19	16
2-Way Interactions	3	7.70	.82
Explained	7	107.98	1.14
Residual	165	94.41	
Total	172	94.96	

Current Employment Status and Returns to the Program

Current employment status, whether respondent was employed at the time of the survey, was examined regarding responsiveness to the program's open-door policy. The descriptive statistics presented in Table 15 show current employment status at the time of the survey for those who returned to the program versus those who did not return. Those who reported they were never out of work (N=73, 29% of total sample) were not included in this table.

Of those who reported returning to the program for help when out of work, 61% were employed at follow-up and 39% were not employed. Of those who did not return to the program when out of work, 55% were currently employed and 45% were not employed. A chi square statistic was computed and no significant differences were found ($X^2(1)=.50$).

TABLE 15

CURRENT EMPLOYMENT STATUS
AND RETURNS TO THE PROGRAM

Current Employment status	Returns to the Program: Returned N=83	Not Returned N=94	Total N=177*
Not employed	32 39%	42 45%	74 42%
Employed	51 61%	52 55%	103 58%

($X^2(1)=.50$,NS)
*Those reporting never out of work were not included in this analysis (N=73)

Current Employment Status, Major Handicap and Returns to the Program

Current employment status was also examined by type of handicap and whether the client returned to the program for placement assistance when out of work. As shown in Table 16 it appears that two of the handicapped groups, the mentally retarded and the "other" handicapped group, had better employment outcomes if they returned to the program for placement assistance. Sixty-five percent of the MR group and 67% of the "other" group who returned to the program for help were currently employed at follow-up, whereas 46% of the MR group and 48% of the "other" group who did not return for help were employed at follow-up. The other two groups, the learning disabled and the emotionally handicapped, did not have better employment outcomes if they returned to the program for help. Sixty-three percent

of the LD group who returned to the program were employed at follow-up compared to 74% of those who did not return for help; 47% of the EH group who returned for assistance were employed compared to 57% of those who did not return.

TABLE 16

RESPONSIVENESS TO OPEN-DOOR POLICY, MAJOR HANDICAP AND CURRENT EMPLOYMENT

	Returns to Program		
Major Handicap and Current Employment	Returned N=83	Did Not Return N=94	Total N=177
MR (N=48)			
Not Employed	9 35%	12 55%	21 44%
Employed	17 65%	10 46%	27 56%
LD (N=38)			
Not Employed	7 37%	5 26%	12 32%
Employed	12 63%	14 74%	26 68%
EH (N=47)			
Not Employed	9 53%	13 43%	22 47%
Employed	8 47%	17 57%	25 53%
OTHER (N=44)			
Not Employed	7 33%	12 52%	19 43%
Employed	14 67%	11 48%	25 57%

PREDICTORS OF SUCCESSFUL EMPLOYMENT: RESEARCH QUESTION 3

To determine which of the ten predictor variables contributed significantly to predict the criterion variable, the number of months employed at short- and long-term follow-up, separate multiple regressions were calculated for the short- and long-term groups. Table 17 shows the variable means, standard deviations, and number of cases for both the short- and long-term analyses. The ten predictor variables included in the analyses were: age, gender, educational level, longest time on a job, skill level of training, transportation availability, counselor interview rating, counselor skill rating, skill level of first placement (by program) and employer ratings. Frequency data (as coded) for the categorical variables is shown in Appendix B.

TABLE 17

MEANS AND STANDARD DEVIATIONS: PREDICTORS OF SUCCESSFUL EMPLOYMENT AT SHORT-AND LONG-TERM FOLLOW-UP

	Short-Term Follow-up Time Wave IV			Long-Term Follow-up Time Waves I, II, III		
Variable	Mean	Std.Dev.	Cases	Mean	Std.Dev.	Cases
Age	28.88	10.35	67	29.50	7.20	240
Sex	1.52	.50	68	1.43	.50	251
Educational Level (see coding)	8.92	3.85	63	7.83	3.34	224
Longest Prior Job (weeks)	110.52	137.97	60	85.05	160.34	206
Skill Level: Training	2.09	1.43	68	1.86	1.05	251
Transportation	3.06	1.39	67	3.06	1.33	238
Counselor Interview Rating	1.62	.38	47	1.59	.45	202
Counselor Skill Rating	1.27	1.25	68	1.00	1.17	252
Skill Level: 1st Placement	2.46	.96	67	2.58	.60	239
Employer Rating: 1st Placement	2.09	.53	43	2.12	.56	141
Months Employed: at Follow-Up	9.90	3.38	67	16.18	9.56	246

As shown in Table 18, the results of the short-term multiple regression analysis (N=68;31 pairwise cases) indicated that there was no significant linear relationship between any of the predictor variables and the criterion variable, months employed over the past 12 months. As shown in Table 19 the results of the analysis which was performed on the long-term group (N=251;111 pairwise cases) also found

TABLE 18

MULTIPLE REGRESSION: PREDICTORS OF EMPLOYMENT OUTCOMES AT SHORT-TERM FOLLOW-UP

Correlation:	Age	Sex	Ed	Lg Job	OES Skill Tr.	Trans	Counselor Int. Rtg.	Counselor Skill Rtg.	1st Placement OES Skill	1st Placement Emp. Rtg.	Mo.Emp.
Age	1.00	.07	.08	.52	.23	.08	.24	.06	.16	.09	.02
Sex		1.00	-.16	.06	-.10	-.17	.35	.06	.09	.08	-.01
Educational Level (see coding)			1.00	-.15	.19	.16	.20	.03	.37	.08	.15
Longest Prior Job (weeks)				1.00	.08	.29	.01	.15	.07	.06	-.09
OES Skill Level: Training					1.00	.09	.30	-.02	.30	.25	.16
Transportation						1.00	.05	.04	.01	.20	-.05
Counselor Interview Rating							1.00	.07	.14	.25	-.04
Counselor Skill Rating								1.00	.13	.16	-.06
OES Skill Level: 1st Placement									1.00	.21	-.07
Employment Rating: 1st Placement										1.00	-.04
Months Employed: Last 2 Years											1.00

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TABLE 19

MULTIPLE REGRESSION: PREDICTORS OF SUCCESSFUL EMPLOYMENT AT LONG-TERM FOLLOW-UP

Correlation:	Age	Sex	Ed	Lp Job	OES Skill Tr.	Trans	Counselor Int. Rtg.	Counselor Skill Rtg.	1st Placement OES Skill	1st Placement Emp. Rtg.	Mo.Emp.
Age	1.00	-.02	-.08	.45	.11	.03	.01	.01	.01	.09	.06
Sex		1.00	.02	-.08	-.26	.21	-.03	.00	.07	.04	-.11
Educational Level (see coding)			.00	-.11	.05	.19	.17	.13	-.32	-.04	.04
Longest Prior Job (weeks)				1.00	.14	.25	-.06	.15	-.05	-.18	-.01
OES Skill Level: Training					1.00	-.14	.09	.15	.21	-.00	-.02
Transportation						1.00	.09	.13	.27	.08	.08
Counselor Interview Rating							1.00	.03	.21	.19	-.06
Counselor Skill Rating								1.00	.14	-.02	.08
OES Skill Level: 1st Placement									1.00	.09	-.11
Employment Rating: 1st Placement										1.00	.13
Months Employed: Last 2 Years											1.00

that there was no significant relationship between any of the predictor variables and the number of months employed over the past 24 months. The low correlations that were found between the predictor variables and the number of months employed indicated that the predictor variables could not predict employment at short- or long-term follow-up.

A forward (stepwise) selection was used to find the best subset of predictors for each major handicap sample. These regression analyses attempted to determine which, if any, of the variables predicted the number of months a particular group of handicapped persons were employed at long-term follow-up. Due to an insufficient number of cases in the short-term sample, separate regression analyses for each group by handicapping condition at short-term follow-up were not appropriate.

Table 20 shows the variable means, standard deviations and number of cases for each of the four major types of handicap at long-term follow-up. Tables 21, 22, 23 and 24 are the correlation tables for each handicapped group: learning disabled, mentally retarded, emotionally handicapped and other handicapping conditions, respectively.

The only significant linear relationship that was found was for the learning disabled sample. As shown in Table 21, the size of the F ($F=8.42$, $df = 1/21$ $p < .01$) indicated that the employers' ratings had a large and significant impact on the number of months employed for the learning disabled group at long-term follow-up. Employers' ratings account for approximately 23% (Adjusted $r^2 = .23$) of the variance in the number of months employed and is a good predictor of this dependent variable.

For the mentally retarded, emotionally handicapped and the other handicapped group, as shown in Tables 22, 23 and 24, respectively, there were no significant linear relationships between any of the predictor variables and months employed at long-term follow-up.

TABLE 20

MEANS AND STANDARD DIVIATIONS: PREDICTORS OF SUCCESSFUL EMPLOYMENT BY MAJOR TYPE OF HANDICAP

Variable	Learning Disabled			Mentally Retarded			Emotionally Handicapped			Other		
	Mean	Std.Dev.	Cases	Mean	Std.Dev.	Cases	Mean	Std.Dev.	Cases	Mean	Std.Dev.	Cases
Age	27.45	4.72	57	29.34	6.65	67	30.80	8.16	59	30.19	8.48	57
Sex	1.35	.48	60	1.57	.50	68	1.38	.49	63	1.38	.49	60
Educational Level (see coding)	7.54	2.54	54	6.33	2.14	60	9.24	3.67	54	8.34	4.06	56
Longest Prior Job (weeks)	65.60	96.29	50	94.09	169.64	52	71.14	172.90	50	106.70	185.54	54
Skill Level: Training	1.87	.97	60	2.06	1.15	68	1.64	1.04	63	1.60	1.00	60
Transportation	2.93	1.40	57	3.43	1.08	65	2.97	1.39	59	2.84	1.40	57
Counselor Interview Rating	1.56	.41	44	1.68	.43	62	1.62	.50	44	1.46	.43	52
Counselor Skill Rating	1.03	1.24	60	1.30	1.25	68	.84	1.11	63	.80	1.02	61
Skill Level: 1st Placement	2.67	.48	57	2.71	.49	62	2.63	.55	60	2.32	.75	60
Employer Rating: 1st Placement	2.16	.54	36	2.16	.59	39	2.21	.45	32	1.95	.64	34
Months Employed: Last 2 Years	18.59	8.54	58	16.77	9.10	66	14.05	9.91	61	15.36	10.24	61

TABLE 21

MULTIPLE REGRESSION: PREDICTORS OF SUCCESSFUL EMPLOYMENT FOR LEARNING DISABLED POPULATION

Correlation:	Age	Sex	Ed	Lp Job	OES Skill Tr.	Trans	Counselor Int. Rtg.	Counselor Skill Rtg.	1st Placement OES Skill	1st Placement Emp. Rtg.	1st Placement Mo.Emp.
Age	1.00	.14	-.01	.23	.26	-.12	.28	.04	.13	-.39	.11
Sex		1.00	.07	-.18	-.10	-.04	-.04	.08	.23	-.08	.02
Educational Level (see coding)			1.00	-.11	-.18	.38	.13	.02	.32	.15	.03
Longest Prior Job (weeks)				1.00	.12	.23	-.27	.31	.08	-.14	-.04
OES Skill Level: Training					1.00	-.09	.17	.18	-.04	-.16	.16
Transportation						1.00	-.05	.01	.11	.16	.18
Counselor Interview Rating							1.00	-.26	.07	-.05	-.01
Counselor Skill Rating								1.00	.04	.04	.22
OES Skill Level: 1st Placement									1.00	-.14	.16
Employment Rating: 1st Placement										1.00	.51*
Months Employed: Last 2 Years											1.00

Summary of Multiple Regression

Variable	B	t	p	R^2	Adj.R^2	Multiple Overall r	F	p
Employer Rating	-8.07	-2.90	.01	.26	.23	.51	8.42	.01

TABLE 22

MULTIPLE REGRESSION: PREDICTORS OF SUCCESSFUL EMPLOYMENT FOR MENTALLY RETARDED POPULATION

Correlation:	Age	Sex	Ed	Lp Job	OES Skill Tr.	Trans	Counselor Int. Rtg.	Counselor Skill Rtg.	1st Placement OES Skill	1st Placement Emp. Rtg.	Mo.Emp.
Age	1.00	.03	-.43	.63	.14	.07	.06	-.07	-.04	-.14	-.07
Sex		1.00	-.05	-.24	-.41	-.25	.09	-.02	-.30	-.15	-.03
Educational Level (see coding)			1.00	-.24	.05	.26	.09	-.07	.34	.28	-.09
Longest Prior Job (weeks)				1.00	.32	.27	.06	.11	.18	.01	-.20
OES Skill Level: Training					1.00	.19	.02	.00	.29	.08	-.11
Transportation						1.00	-.14	.04	.23	.02	-.02
Counselor Interview Rating							1.00	.01	.13	.29	-.22
Counselor Skill Rating								1.00	.05	.00	.23
OES Skill Level: 1st Placement									1.00	.14	-.23
Employment Rating: 1st Placement										1.00	-.06
Months Employed: Last 2 Years											1.00

TABLE 23

MULTIPLE REGRESSION: PREDICTORS OF SUCCESSFUL EMPLOYMENT FOR EMOTIONAL HANDICAPPED POPULATION

Correlation:	Age	Sex	Ed	Lp Job	OES Skill Tr.	Trans	Counselor Int. Rtg.	Counselor Skill Rtg.	1st Placement OES Skill	1st Placement Emp. Rtg.	Mo.Emp.
Age	1.00	-.07	-.06	.27	.14	-.05	-.02	.05	.16	.22	.03
Sex		1.00	.29	.29	-.09	-.20	.09	.11	-.15	.26	-.11
Educational Level (see coding)			1.00	.04	.12	-.05	-.14	.23	.10	.00	.12
Longest Prior Job (weeks)				1.00	-.05	.20	.07	.22	-.02	-.06	.11
OES Skill Level: Training					1.00	.13	-.00	.12	.12	-.17	.12
Transportation						1.00	.21	.15	.36	-.39	.08
Counselor Interview Rating							1.00	.16	.08	.23	.03
Counselor Skill Rating								1.00	.20	-.26	.06
OES Skill Level: 1st Placement									1.00	-.13	-.05
Employment Rating: 1st Placement										1.00	-.10
Months Employed: Last 2 Years											1.00

TABLE 24

MULTIPLE REGRESSION: PREDICTORS OF SUCCESSFUL EMPLOYMENT FOR OTHER HANDICAPPING CONDITIONS

Correlation:	Age	Sex	Ed	Lg Job	OES Skill Tr.	Trans	Counselor Int. Rtg.	Counselor Skill Rtg.	1st Placement OES Skill	1st Placement Emp. Rtg.	Mo.Emp.
Age	1.00	-.12	-.12	.56	-.07	.16	-.06	-.08	-.17	.36	.25
Sex		1.00	.00	-.24	.33	-.23	.04	.08	.00	.04	-.32
Educational Level (see coding)			1.00	-.19	-.01	.12	.44	.16	.39	-.01	.16
Longest Prior Job (weeks)				1.00	.19	.32	-.15	.05	-.02	.39	.09
OES Skill Level: Training					1.00	.25	.14	.24	.30	.11	-.10
Transportation						1.00	.19	.24	.28	.19	.11
Counselor Interview Rating							1.00	.09	.37	.16	-.00
Counselor Skill Rating								1.00	.26	.09	-.13
OES Skill Level: 1st Placement									1.00	.15	-.17
Employment Rating: 1st Placement										1.00	-.14
Months Employed: Last 2 Years											1.00

SUMMARY OF RESULTS

Did handicapped participants in the program retain competitive employment several years after leaving the program (Research Question 1)?

- 70% of the total sample, participants placed one to ten years ago, were currently employed (53% full time, 17% part time).

- 95% of those currently employed were competitively employed: five percent were in sheltered workshops.

- the long-term group did not differ significantly from the short-term group regarding current employment status:
  - 72% of the short-term group were currently employed at one-year follow-up
  - 70% of the long-term group were currently employed two to 10 years following placement

- 55% of the long-term group and 49% of the short-term group were in full-time positions; 15% of the long-term group and 23% of the short-term group were in part-time positions.

- Those placed six to ten years ago had the highest percentage currently employed (75 percent) and the highest percentage of full-time workers (66 percent).

- Regarding months employed, the short-term group did differ significantly from one of the three long-term groups (those placed three to six years ago) but not from the other two groups.

- There were no significant differences between the three long-term groups (those placed six to ten years ago, three to six years ago, and two to three years ago) regarding months employed over the last two years.

Was type of handicap related to employment outcomes (Research Question 1)?

- Two-thirds or more of all four handicapped groups were currently employed at follow-up:
  - 81% of the learning disabled were employed
  - 70% of the mentally retarded were employed
  - 66% of the emotionally handicapped were employed
  - 67% of the other handicapped group were employed

- The learning disabled group had the highest percentage employed full-time (64 percent).

- The mentally retarded group had the highest percentage of part-time workers (24 percent).

- The learning disabled group had a significantly higher percentage of months employed over the last 12 or 24 months than the emotionally handicapped group, but did not differ significantly from the other two handicapped groups.

- There were no significant differences between the emotionally handicapped, the mentally retarded and the "other" handicapped group regarding months employed over the past 12 or 24 months.

- The mentally retarded group had significantly lower skill level jobs and lower salary than the other three handicapped groups.

Was the open-door policy of continuous placement assistance related to successful employment outcomes (Research Question 2)?

- 33 percent of the participants returned for assistance, 38 percent did not return and 29 percent were never out of work.

- No significant differences were found regarding employment outcomes for those who returned to the program for placement assistance versus those who did not return; the majority of both groups were employed at follow-up (61 percent versus 55 percent).

Was the open-door policy more beneficial for certain handicapped groups (Research Question 2)?

- No significant interactions were found for type of handicap, responsiveness to the open door policy, and employment outcomes.

- Two of the handicapped groups, the mentally retarded and "other" groups, had better employment outcomes if they returned to the program for placement assistance.

- The other two handicapped groups, the learning disabled and the emotionally handicapped did not have better employment outcomes if they returned to the program.

What factors contribute significantly and predict successful employment for handicapped adults who participated in an industry-based rehabilitation program (Research Question 3)?

- Employers' ratings at one month on-the-job had a significant relationship to the number of months employed for the learning disabled group at long-term follow-up.

- None of the 10 predictor variables examined had a significant relationship with months employed for the mentally retarded, the emotionally handicapped or the "other" handicapped group.

- No significant relationship was found between any of the predictor variables and the number of months employed for either the short-term or the long-term group.

IV. DISCUSSION

One objective of this research study was to determine if the industry-based rehabilitation model achieves the goal of competitive employment for handicapped participants at short- and long-term follow-up and whether type of handicap is related to employment outcomes.

Short-term evaluation data was obtained by the Nassau BOCES Industry-Based Program over the past ten years; graduates of the program had an overall employment record of 79% at one-year follow-up. This study confirmed that most participants (72%) who were successfully placed in competitive jobs by the program maintained employment at one year following placement. However, it was not known whether handicapped participants in an industry-based program retained competitive employment several years after leaving the program.

One might hypothesize that employment rates would decrease with the passage of time due to such factors as degeneration of physical or emotional condition, the physical and emotional difficulty of handling a job over a long time period (such as transportation problems, boredom, fatigue, etc.) or employment factors such as companies going out of business or leaving the area. Also, participants in the program receive on-the-job support for much of the first year following placement and, as support is withdrawn, one might expect more employment difficulties leading to lower employment rates. On the other hand, it could be hypothesized that with the passage of time and establishment of a work history, young adults would tend to overcome their problems and achieve a stable vocational history. An earlier follow-up study of 26 state rehabilitation agencies (Bailey,1965) found that employment rates endured over time (1 to 10 years after placement), though there was a somewhat lower employment rate with the passage of time.

The results of this study support the hypothesis that stable vocational adjustments are achieved. Over half of the long-term group had been employed for most or all of the last two years. Furthermore, there were no significant differences between the three long-term time waves (those placed 2 to 3 years ago, 3 to 6 years ago, and 6 to 10 years ago) regarding months employed over the last two years. There was a significant difference between the short-term group and one of the three long-term time waves (those placed 3 to 6 years ago), but the short-term group did not differ significantly from the other two long-term time waves. The short-term group did have the highest percentage of months employed over time but this was not surprising since this percentage was based on a 12-month period compared to 24 months for the long-term time waves; also, all short-term clients began the year with a job placement and received support from the program for three to twelve months following placement. What was surprising was that the short-term group did not differ significantly from two of the three long-term time waves and that the three long-term groups did not differ significantly from each other. The results indicate a high degree of employment stability with the passage of time. It appears that handicapped adults who are placed in competitive jobs and maintain employment for a one-year period establish a stable vocational adjustment and are likely to remain employed over time.

The results regarding current employment status, whether respondents were employed or not at the time of the survey, also documented the maintenance of employment over time: 70% of those placed 2 to 10 years ago were currently employed at long-term follow-up compared to 72% of those placed one year ago at short-term follow-up. Full-time employment for the combined long-term group was slightly higher than for the short-

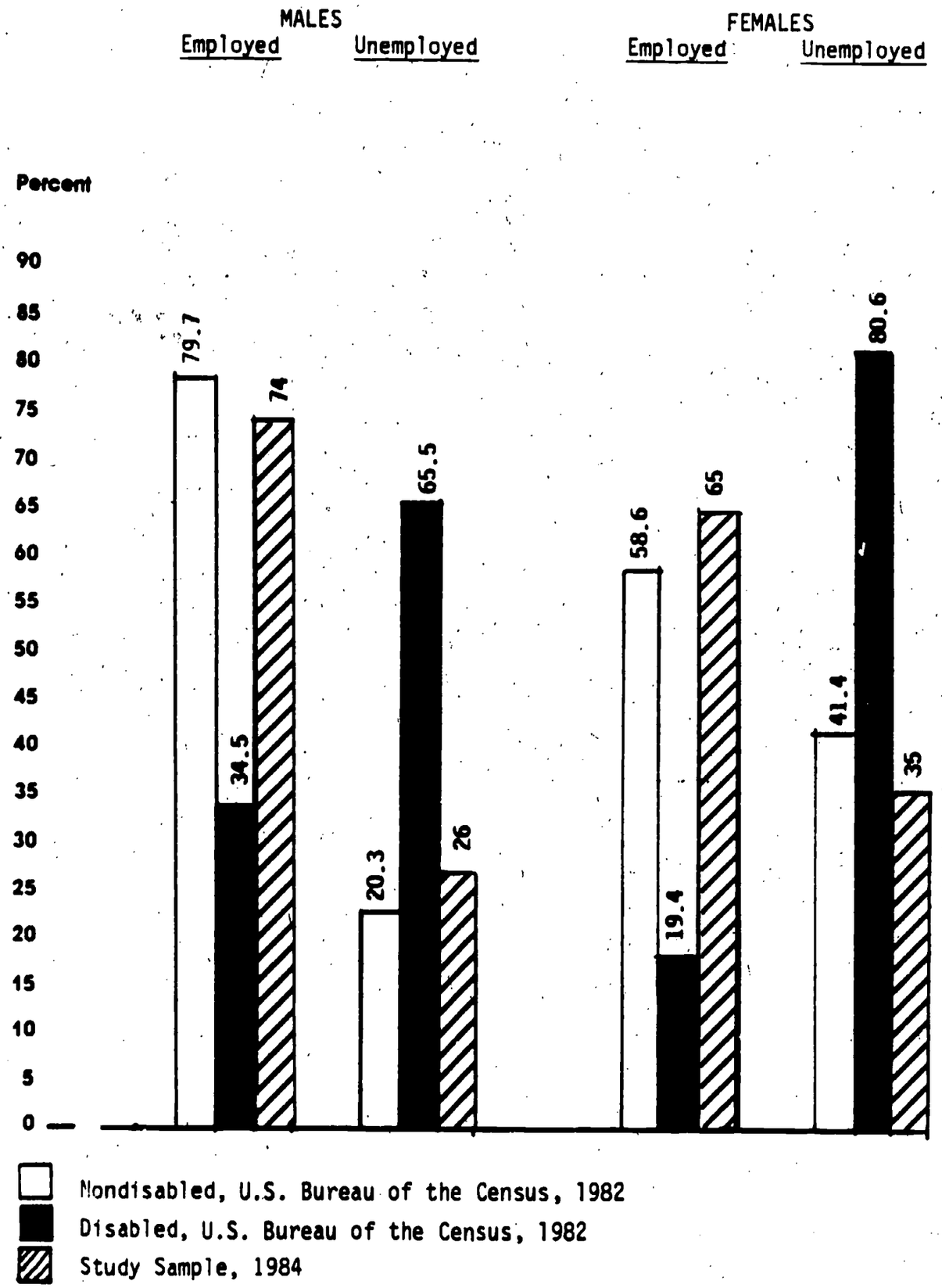
term group (55% versus 49%); those placed 6 to 10 years ago had the highest percentage of full-time workers (66%). Although there were only slight differences between the total long-term and the short-term group in overall employment rate, there appears to be a tendency for full-time employment to increase with the passage of time.

Overall, the current employment rate is very impressive at both long- and short-term follow-up, especially when the employment statistics for participants in this program are compared to others with disabilities and to the nonhandicapped population. According to the Department of Education's Office of Special Education and Rehabilitative Services (1984), between 50 to 80 percent of working-age adults who report a disability are jobless. Yet, the current unemployment rate for the sample of handicapped adults who participated in the BOCES Industry-Based Program is only 30 percent. Moreover, as shown in Figure 1, the current employment rate for male participants at follow-up (74%) is very close to the employment figures for nonhandicapped males (79%) and much higher than the census figures for males with disabilities (34.5%) as reported in the 1982 Current Population Reports, U.S. Bureau of the Census. In addition, handicapped females who were placed in jobs by the Industry-Based Program had a higher employment rate at follow-up (65%) than the 1982 census figures for nonhandicapped females (58.6%) and a much higher employment rate than disabled females (19.4%). Even though the handicapped females who participated in the Industry-Based Program were significantly less likely than the handicapped males in the program to be employed in full-time positions, this appears to be only a reflection of the differences in employment for men and women in general. Figure 1 shows that female participants in the program have fared even better than their male counterparts when compared to disabled and nondisabled of the same gender.

The results of this study also report the philosophy of the BOCES Industry-Based Program that adults with many different types

FIGURE 1

EMPLOYMENT STATUS: COMPARISON OF STUDY SAMPLE
WITH CENSUS POFULATION OF DISABLED AND NONDISABLED



of handicapping conditions can be served by the same program and that people with all types of handicapping conditions can achieve and maintain competitive employment. Over three-fourths of the learning disabled and two-thirds of the mentally retarded, emotionally handicapped and those with other handicapping conditions (including multiply handicapped) were currently employed at long-term follow-up.

Although all handicapped groups did very well, some groups did have better employment outcomes than others. Those with learning disabilities had the highest percent of months employed over the last two years for long-term follow-up and over the past year for short-term follow-up, and differed significantly from the emotionally handicapped group which had the lowest percent time employed. The learning disabled group also had the highest current employment rate (81%) and the highest percent in full-time employment (64%). The mentally retarded group had the second highest percent employed (70%), although this included a high percentage of part-time workers (24%). The results are consistent with recent research studies which found that mentally retarded adults can achieve and maintain competitive employment when trained in actual work places (Wehman & Hill, cited in Leavitt, 1984; Hillmann, Weinglass & Lieberman, cited in Leavitt, 1984).

The lower employment rate for the emotionally handicapped group suggests that some additional help or training for this population may be warranted. In reporting that the emotionally disabled were typically less successful as rehabilitation clients, Sankovsky (1968) noted that the negative trend for emotional rehabilitation may be a reflection of the lack of adequate therapy and know-how in working with these disabilities rather than an inherent characteristic of failure associated with the disabling condition. Perhaps the program could provide additional training in social and attitudinal skills or perhaps more help is required from mental health professionals. Working with parents or clients

to facilitate realistic goals and attitudes may be a worthwhile effort.

The skill level and salary of respondents' current job was significantly related to type of handicap. The mentally retarded group had lower skill level jobs than the other three groups (over three-fourths of the mentally retarded respondents were in unskilled jobs) and lower salaries which appears consistent with the limited intellectual ability of the mentally retarded population. The "other" handicapped group, which included medical, physical, speech, hearing and visual handicapping conditions as well as those with multiple handicaps, had the highest skill level positions; many in this group had no intellectual impairments. It appears that the skill level of the current job, type of handicap and degree of intellectual impairment are related.

However, it is unclear from these results whether the skill level of the current job was in fact the most appropriate level for most respondents. Some respondents with unskilled jobs commented that they would like less boring work; a few said they had not been given the opportunity to advance to higher skilled jobs which they thought they were capable of handling. On the other hand, most of this sample had some intellectual or emotional impairment that might have limited them to less skilled work; a few commented that they had been placed in jobs that were too difficult to handle. It is possible that the high percentage still employed at long-term follow-up was due in part to realistic job placements and acceptance of what was realistic by most of the program participants. According to program staff, realistic job expectations are very important for achieving successful employment outcomes. More research is needed to determine if the handicapped population is usually employed at appropriate skill levels or

whether the handicapped tend to be employed in jobs below their capacity. Also, the question of promotion and upgrading of handicapped employees as compared to nonhandicapped peers of similar ability needs to be addressed.

Regarding the BOCES open-door policy of continuous placement services, no significant differences were found regarding employment outcomes for those who returned to the program for placement assistance versus those who did not return for help when out of work; the majority of both groups were employed at follow-up. The results indicate that many participants who have acquired some job history and the skills necessary for the first job placement are able to obtain jobs on their own when out of work. However, an almost equal number felt a need to return to the program for placement assistance. It seems that the open-door policy of continuous placement services is valued by these clients and has been effective in helping them to obtain work.

Since the two groups were not randomly assigned to these conditions and decided themselves whether to return for assistance, other factors such as severity of handicap, job history, self-esteem and level of independence may have made these unequal groups. It may be that those who were able to find jobs on their own were less severely disabled than those who returned to the program for placement assistance. The descriptive data seem to support this possibility. Two of the handicapped groups. the mentally retarded and the "other" handicapped group (including the physically disabled and multiply handicapped) had somewhat better employment outcomes if they returned to the program for placement assistance; these two handicapped groups may be more easily identified as handicapped than the emotionally handicapped and learning disabled groups and may have had more difficulty getting jobs due to their intellectual or physical impairments.

Regarding predictors of successful employment, it was disappointing that none of the ten client variables examined had a significant relationship with months employed at short- or long-term follow-up. The only significant linear relationship found was for the learning disabled sample; employers' ratings at one-month on-the-job had a significant relationship to the number of months employed at long-term follow-up. This means that rehabilitation counselors and employers should pay particular attention to this rating for the learning disabled and provide additional support to those with poorer ratings.

It is not clear why any of the variables were not significant predictors for the other three handicapped groups. One reason may be little variability in counselor ratings and few negative evaluations. In the case of employer ratings, scores may have declined with time, as suggested by Wehman & Hill's study (cited in Leavitt, 1984) of the mentally retarded and the first rating was therefore not a good predictor. Another problem is that so many different client variables impact on employment outcomes such as severity of handicap, motivation, interest, personality factors, ethnic group, marital status, sources of other income and parental attitude. The economic conditions affecting employment outcomes also make it difficult to determine significant client factors related to success. Sankovsky (1968) concluded from his review of the literature on predicting successful outcomes that the probability of successful prediction using multiple variables is so small that it serves little functional purpose; this study confirmed that finding. Perhaps other research efforts will find better measures of these variables or better predictors of successful outcomes.

V. CONCLUSIONS AND RECOMMENDATIONS

Competitive employment is a major rehabilitation goal for handicapped adults and industry-based rehabilitation programs appear to be a promising approach to achieving this goal.

The results of this study showed that an industry-based rehabilitation program did achieve the goal of competitive employment for most handicapped participants at short- and long-term follow-up. Seventy percent of the total sample were currently employed (not necessarily in the original placement); 95 percent of those employed were in competitive positions. Over two-thirds of the respondents were currently employed at both long-term follow-up (two to 10 years following placement) and short-term follow-up, one year after placement. Those placed six to 10 years ago had the highest percentage currently employed (75%) and the highest percentage of full-time workers (66%). Also there were no significant differences between the three long-term groups (those placed 6 to 10 years ago, 3 to 6 years ago and 2 to three years ago) regarding months employed over the past two years.

The results indicate a high degree of employment stability with the passage of time. It appears that most handicapped adults who have been successfully placed in competitive jobs by a supportive industry-based rehabilitation program establish a stable vocational history and are likely to remain employed over time.

Since this study examined the participants of one Projects With Industry program, the results cannot be generalized to all such programs. However, the study did examine the participants of the program over a 10-year period, during which time the staff and program underwent many changes. Also the findings of recent studies of other industry-based programs (Leavitt, 1984; Shafer, 1984)

are consistent with the outcomes of this study. This strongly suggests that the general model is successful.

Therefore, it is highly recommended that federal, state and community support be continued for industry-based rehabilitation programs. Recently, evaluation requirements were established for all currently funded Projects With Industry programs. With outcome data from many different programs, researchers will be able to determine the success of the general model. It is recommended that these programs are also helped and encouraged to computerize their client data for improving research utilization as well as for improving client placement services through computerized job-matching systems.

Though this study did not include a cost-benefit analysis, the fact that 70 percent of the participants were earning a salary (some over a ten-year period) indicates the financial benefits. Wehman and Hill (1982) examined the cost-benefits of their project and found that for the 56 severly disabled placed into competitive employment over a three-year period, the total direct financial benefit on public expenditures, minus projects expenditures, was over $46,000. This suggests that competitive employment programs may realize savings to the public as well as benefit the disabled. It is recommended that other studies address the cost/benefit issue so that the actual cost or financial gain of supporting industry-based programs can be determined.

Moreover, the results of this study support the philosophy of the BOCES Industry-Based Program that adults with many different types of handicapping conditions can be served by the same program and that people with all types of handicapping conditions can achieve and maintain competitive employment. Over three-fourths of the learning disabled and two-thirds of the mentally retarded, emotionally handicapped and those with other handicapping conditions

(including multiply handicapped) were currently employed at follow-up. Though there was a significant difference between the learning disabled and the emotionally handicapped group regarding months employed over time, there were no significant differences between any of the other handicapped groups. Therefore, it is recommended that industry-based rehabilitation programs which are currently serving only one handicapped group consider expanding their services to include all handicapped adults. This would seem to be more cost-efficient and a more effective approach for meeting the needs of industry as well as the needs of our handicapped population.

The results of this study are somewhat unclear regarding the benefit of an open-door policy of continuous placement assistance. No significant differences were found regarding employment outcomes for those who returned to the program for placement assistance versus those who did not return for help when out of work; the majority of both groups were employed at follow-up. The results indicate that many participants who have acquired some job history and the skills necessary for the first job placement are able to obtain jobs on their own when out of work. However, an almost equal number felt a need to return to the program for placement assistance. It seems that the open-door policy of continuous placement services is valued by these clients and has been effective in helping them to obtain work.

Since clients were not randomly assigned to these conditions, factors such as severity of handicap may have made these unequal groups; the policy appears to have been more beneficial to those with certain handicapping conditions. Therefore, this policy seems to be a desirable extension of services if the resources are available to effectively help clients secure and maintain a placement that lasts over time as well as serve those in need of additional placement assistance.

The ten client variables examined in this study did not significantly predict successful employment outcomes at long- or short-term follow-up or for any of the handicapped groups with one exception; employer ratings of clients after one-month on-the-job were found to be significantly related to successful employment outcomes for the learning disabled group. It is recommended that future research efforts attempt to find better measures of these variables or select different predictor variables.

Since the industry-based model has been shown to be effective with handicapped adults, it is recommended that the Projects With Industry program be adapted or expanded to meet the needs of youth in transition from school to work. A recent report estimated that 28,000 handicapping students will leave school in the next three years and that there may be no jobs or sheltered programs for the majority of them.

Finally, it is important to remember that the participants in this follow-up study were clients who were successfully placed in industry and that the results of this study can only be generalized to similar populations. Other types of services may be needed for the handicapped who may not be able to achieve competitive employment.

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APPENDIX A

Description of Industry-Based Program and Outline of Project Model

The Handicapped at Work

How a BOCES program finds jobs for those with special needs

by Leslie Klein, *Certified Rehabilitation Counselor, Industry-Based Special Needs Program*

It has long been the view of those involved in training and assisting the handicapped that each human being is special, that all people can contribute to society and that, given the chance, a person prefers to be independent and operating at his or her highest level of ability.

Bridging the gap between this belief and reality is a most difficult task. In a competitive world, is it possible to make room for those with special needs? The answer is a resounding yes—as evidenced by the success of the Industry-Based Special Needs Program.

The program, which is administered by Nassau BOCES Division of Occupational Education and funded largely through federal grants, has been placing more than 125 handicapped persons in jobs each year for the past 10 years. Moreover, placements cover the full range of occupational levels, from bookkeepers and teachers to electronic assemblers, secretaries and food-service aides.

Here's how the program works:

The process begins when an individual comes to the program's headquarters at Nassau Tech's South Center in North Bellmore for an intake interview. This new client, an adult or out-of-school youth, has usually been referred by a state or local rehabilitation or mental health agency, a local school district, the Department of Labor, a private rehabilitation training center, a drug- and alcohol-abuse clinic, a correctional facility or a participating employer.

After having been diagnosed and treated and trained for an extensive period and not having found successful employment, many clients believe that handicaps are indeed cause for despair, lowered self-esteem, and marginal life expectations. The first step in a new direction is taken when instructor and client begin to explore the individual's strengths, special training, natural aptitudes, and genuine interests. The focus is not on the client's disability, which may be a physical or emotional handicap, retardation, or learning disability, but rather on his or her unique, marketable skills.

Here is where the industry-based component is especially significant. Instructors spend a large percentage of their time in industry, supervising clients who have been placed, and are fully aware of specific job demands and what is necessary for vocational success. When a client states his job goal, an instructor can expertly advise whether the goal is realistic. If it is—and often this is the case—actual job-placement efforts begin. What also evolves is a respectful partnership, occurring because an objective outside party assures the individual that he will be able to achieve his goal.

Those who are not yet ready for placement can receive referral services, evaluation or short-term training. Individualized training programs are available in electronic assembly, library shelving, ZIP coding, order picking and clerical work. Tasks duplicate existing jobs in industry. Participation in this

Hans Werberg has a history of emotional problems. At the time he was referred to the Industry-Based Special Needs Program, Hans was 51 and was supporting five children and a wife who is legally blind. He was living on a limited income from the German government, which paid restitution for the death of his parents in a concentration camp. Hans had difficulty keeping a job because of his inability to produce under pressure. The Industry-Based Program located an understanding employer and provided on-the-job support. Hans is presently working for the Barth Spencer Corporation as a porter in a full-time permanent position and is a member of the union.

aspect of the program is especially motivating because fellow trainees are often placed, thus reinforcing the validity of the course work.

Job skills are only part of what is necessary for a positive work adjustment. Of equal importance are socialization skills, understanding of expected work attitudes and behaviors and a willingness to accept supervision. These issues are addressed through ongoing counseling and by means of the Adkins Life Skills program, a learning kit that uses videotaped lessons and also calls for students to videotape themselves undergoing mock job interviews.

When a client is being groomed for job placement, careful attention is also given to practical concerns, such as transportation needs, work hours and accessibility to medical care, in addition to job application and interview skills.

The Special Needs staff actively follows up job leads that seem appropriate for clients. Employers are made aware of the untapped potential of carefully screened handicapped job applicants. Instructors are able to allay possible fears because of their conviction, based on past performance records, that the handicapped worker is able to function as well as, if not better than, the nonhandicapped worker. Past studies of attendance, loyalty and concentrated work effort prove this.

To ensure that applicants have a good chance to succeed, instructors guarantee that they will supervise work adjustments and intercede if any problems should arise. Monthly job-rating forms are filled out by the job supervisor and instructor, and the results are shared with the client. Such items as appearance, attendance, attitude, cooperation, initiative, performance and responsibility are evaluated.

Initial job placements are not always successful. As a matter of fact, sometimes it takes two or three placements before a satisfactory work adjustment is attained. With skilled counseling, job failures can be seen as learning experiences to be applied to the next placement.

Probably the most persuasive argument for hiring the handicapped is a successful job placement. Competitive work performance by clients has resulted in a willingness by industry to hire additional Special Needs clients as openings occur, sometimes resulting in a cluster of three or more placements in one company. Nassau Tech has a tradition of acknowledging participating employers by holding an Industry Luncheon at which awards are given to companies for their ongoing support of the program.

And this is how it is done. By respecting the potential of all people, by supporting a client's realistic goals, and by convincing employers to see for themselves that handicapped individuals can be productive members of the work force, the Industry-Based Special Needs Program has closed the gap between theory and reality. Continuing placement of clients ensures the handicapped their rightful place in society and offers them the opportunity to repay society as taxpaying, rather than tax-receiving citizens. C

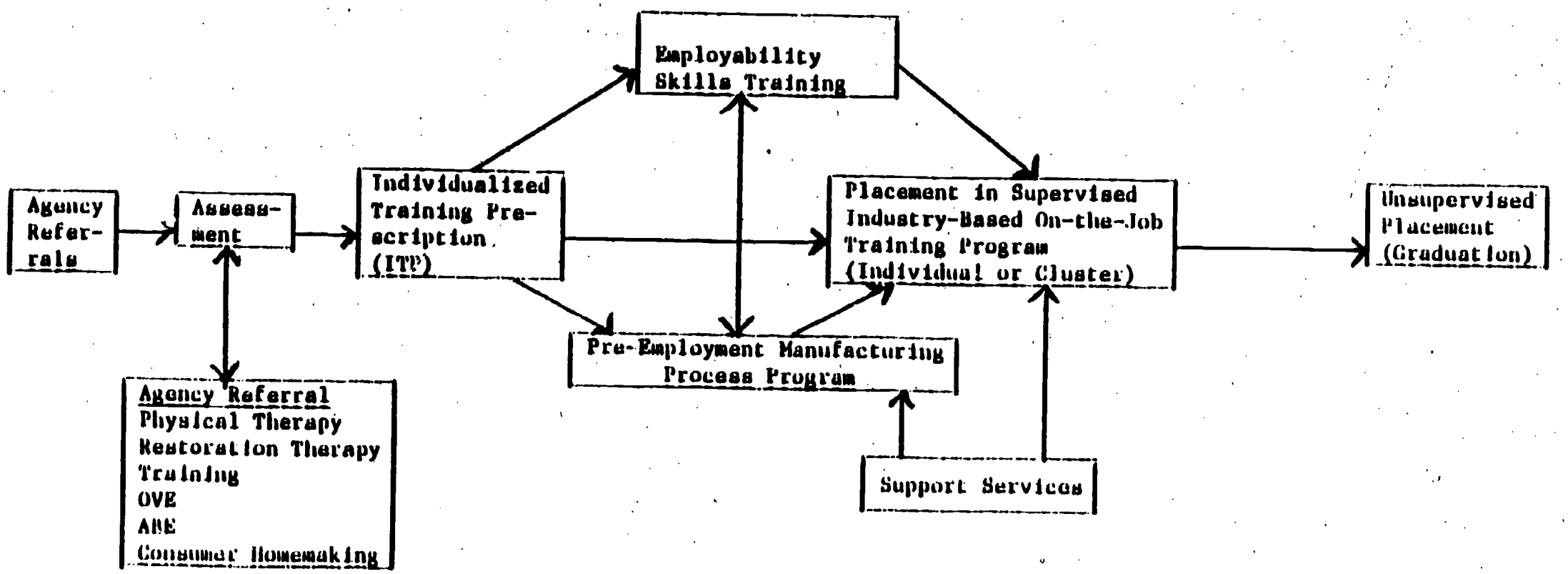
Timmy Amato, who is now 25, was referred to Special Needs by the Office of Vocational Rehabilitation in March, 1977. He had a history of limited learning ability and had received training in a sheltered workshop. Timmy was eager to work, but needed much supervision and direction before mastering a task. Special Needs provided government subsidized positions for training, as well as on-the-job instruction. As a result of the years of intervention, Timmy is today a full-time packer/stockman for the Barth Spencer Corporation.

Mary Nally became legally blind in 1980 as a result of childhood diabetes. She had worked as a secretary before the onset of blindness, but had not worked following her loss. The Industry-Based Program placed her on a CETA work-experience program in her local town hall as a dictaphone typist. As a result of Mary's determination to succeed and the intervention of the Special Needs Program, Mary was hired on a full-time permanent basis following the completion of her CETA contract in May, 1983.

NASSAU BOCES INDUSTRY BASED-PROGRAM

FIGURE 1

OUTLINE OF PROJECT MODEL



APPENDIX B

Coded Predictor Variables

Frequency Tables

FREQUENCY DATA

Coded Predictor Variables	Frequency	Percent
Gender		
1. Male	142	44.5
2. Female	177	55.5
Educational Level (as coded)		
1. Elementary (Special Class)	12	4.2
2. Elementary (Regular)	6	1.9
3. Elementary (Both)	1	.3
4. Some High School (Special)	25	8.7
5. Some High School (Regular)	19	6.6
6. Some High School (Both)	2	.7
7. High School Diploma (Special Classes)	94	32.9
8. High School Diploma (Regular Classes)	59	20.5
9. High School Diploma (Both)	14	4.4
10. High School Equivalency (Special Classes)	8	2.8
11. High School Equivalency (Regular Classes)	5	1.7
12. High School Equivalency (Both)	2	.7
13. Some College (Special Classes prior to college)	9	3.1
14. Some College (Regular Classes prior to college)	27	9.4
15. Some College (Both)	2	.6
16. College Graduate or Higher (Regular Classes prior to college)	3	1.0
Skill Level: Training		
1. Skilled	36	11.3
2. Semi-skilled	125	39.2
3. Unskilled	97	30.4
Skill Level: 1st Placement		
1. Skilled	16	5.3
2. Semi-skilled	99	30.9
3. Unskilled	187	61.9
Transportation		
1. Drives own car	82	26.9
2. Drives other car	12	3.9
3. Chauffered	26	8.5
4. Public Transportation available	183	60.0
5. Other	2	.7
Counselor Interview Rating		
1. Positive	122	49.0
2. Positive and Negative	124	49.8
3. Negative	3	1.2
Counselor Skill Rating		
1. Excellent	29	9.0
2. Good	87	26.6
3. Satisfactory	36	11.2
4. Needs Improvement	3	.9
Employer Rating: 1st Placement		
1. Excellent	27	14.8
2. Good	118	64.5
3. Satisfactory	24	13.1
4. Needs Improvement	14	7.7

APPENDIX C

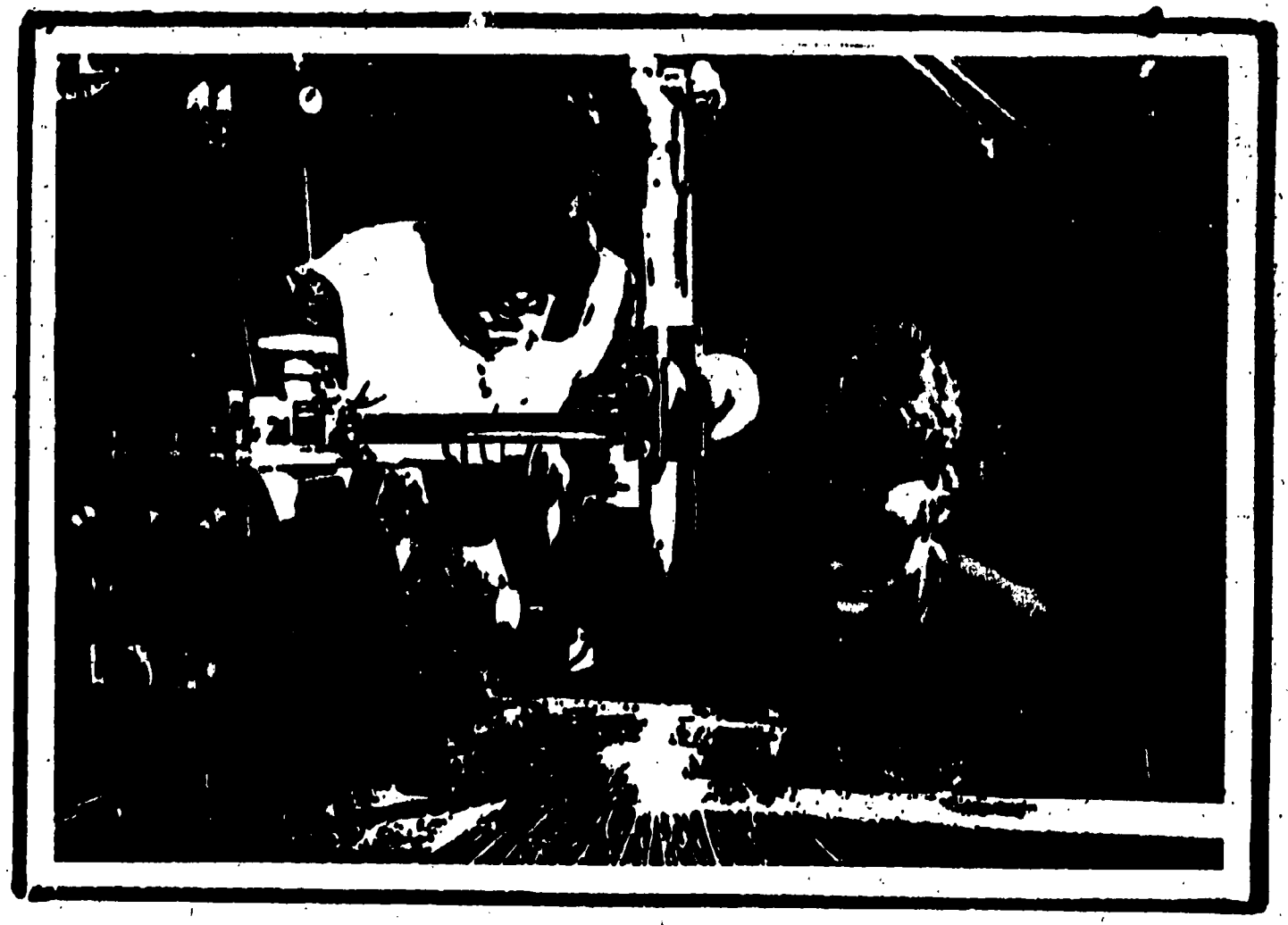
Data Collection and Coding Instruments

- Job History Questionnaire
  (Survey Instrument)

- Job History Information Coding Form
  (For Coding Job History Questionnaire)

- Summary Data Form
  (For Coding Information in Clients' Files)

JOB HISTORY



INFORMATION

Developed by Diane E. Liebert for an NIHR supported study.
Factors Related to Short- and Long-term Employment Outcomes
for Handicapped Participants in an Industry-based Rehabilitation Program

JOB HISTORY

Please circle the number of your answer.

Q. 1. Are you working now?

1. No. When did you last work? _____(Year)
2. Yes, full time
3. Yes, part time

Q. 2. Is the company you now work for (or last worked for):

1. A sheltered workshop
2. Competitive-for profit
3. Not for profit agency

Q. 3. How much did you work in 1983?
(From January, 1983 to December, 1983)

1. Did not work at all in 1983
2. Worked a little (1 to 3 months)
3. Worked less than half of the year (4-6 months)
4. Worked over half of the year (7-10 months)
5. Worked all year or almost all year (11-12 months)

Q. 4. How much did you work in 1982?
(From January, 1982 to December, 1982)

1. Did not work at all in 1982
2. Worked a little (1-3 months)
3. Worked less than half of the year (4-6 months)
4. Worked over half of the year (7-10 months)
5. Worked all year or almost all year (11-12 months)

Q. 5. Have you ever been out of work and returned to the BOCES Industry Based program for help?

1. Yes
2. No, never out of work
3. No, out of work but did not return:
Please explain why _____

_____

ID _____

Q. 6. Circle the highest grade level you completed before going to the BOCES Industry Based (Special Needs) program.

1. Elementary School
2. Some High School
3. High School Diploma
4. High School Equivalency Diploma (GED)
5. Some College
6. Other, please explain _____

_____

Q. 7. Did you have mostly regular classses or special classes?

1. Regular classes
2. Special classes

Q. 8. After you went to the BOCES Industry Based (Special Needs) program, did you attend any school or vocational training program?

1. No
2. Yes, High School or High School Equivalency
3. Yes, College, Number of Years _____
4. Yes, Job training. Please explain type of training _____

Q. 9. Marital Status:

1. Single
2. Married
3. Divorced/Separated

Q. 10. Sex:

1. Male
2. Female

Q. 11. Who do you live with now, if anyone?

1. Live alone
2. Live with parents or other relatives
3. Live with wife/husband or children
4. Live with friend(s)

THANK YOU. PLEASE CONTINUE
TURN PAGE OVER

INSTRUCTIONS: Please fill in the information on your past four jobs. If you are now employed, start with your current job. If you are not employed, start with your most recent job.

WHERE DID YOU WORK? (Name or Type of Company)	WHEN DID YOU WORK THERE?	WHAT DID YOU DO? (Job title and duties)	NO. OF HOURS WORKED EACH WEEK	SALARY	REASON FOR LEAVING
	From / Mo./Yr. — To / Mo./Yr.	Title_____ Duties_____ _____	_____ Hours Per Week	$	
	From / Mo./Yr. — To / Mo./Yr.	Title_____ Duties_____ _____	_____ Hours Per Week	$	
	From / Mo./Yr. — To / Mo./Yr.	Title_____ Duties_____ _____	_____ Hours Per Week	$	
	From / Mo./Yr. — To / Mo./Yr.	Title_____ Duties_____ _____	_____ Hours Per Week	$	

PLEASE USE BACK OF THIS PAGE FOR COMMENTS OR SUGGESTIONS

JOB HISTORY INFORMATION

CARD #3

			Computer Card	Col. #
Code from Page 1	ID #		____	1 - 4
	Q 1	Code 9 if not available	_	5
	2		_	6
	3		_	7
	4		_	8
	5		_	9
	6		_	10
	7	Code 3 if both	_	11
	8	Code 5 if Basic Skills	_	12
	9		_	13
	10		_	14
	11		_	15
Code from Page 2				
A. Phone interview (1) or Mail (2)			_	16
B. Month (date) form was completed			__/84	17-20
C. Number of jobs held in last 2 years			_	21
D. Total number of months employed in last 2 years			__	22-23
E. Longest job held in last 2 years - number of years at that job. Code direct.			_	24
0 = No job held 1 year or more				
1 = 1 year				
2 = 2 years, etc.				
3 = 3 years, etc.				
9 = 9 or more				
F. Current job history (Code 0 if unemployed) (Code 9 if information not available)				
1. Date employed from __/__ (mo. yr.)			__/__ (mo. yr.)	25-28
2. Job Title duties _____				
DOT # ___/___/___		1st 3 digits	___	29-31
		middle 3 digits	___	32-34
3. OES Skill Level		OES Skill	_	35
4. Hours worked:		Hours per week	__	36-37
5. Salary:		Hourly wage	___	38-40
		Week	___	41-43
		Year	_____	44-48

G. Last job held (Code 0 if no other job held)
(Code 9 if not available)

1.	Date employed from	__/__ mo. yr.	49-52
2.	Date employed to	__/__ mo. yr.	53-56
3.	Job Title _____		
	DOT # ___/___/___ 1st 3 digits	___	57-59
	middle 3 digits	___	60-62
4.	OES skill level — OES Skill	_	63
5.	Salary — Hours	___	64-66
	Week	___	67-69
	Year	_____	70-74
6.	Reason for Leaving	_	75

0. No reason given
1. Quit better job
2. Quit illness, disability
3. Quit transportation problem
4. Quit, other reason
5. Laid off - not enough work
6. Fired - late, other work problems
7. Fired - problem with boss, other people
8. Fired - other reason
9. Other

7.	Type of Company (last job held)	_	76

1. Sheltered workshop
2. Competitive
3. Not-for-profit

8.	Hours worked per week: 1 = full time 2 = part time	_	77

H. BOCES Placement

1.	Is present job a BOCES placement? 0 = Unemployed; 1 = Yes; 2 = No; 9 = Not Available	_	78
2.	Was last job a BOCES placement? 0 = Unemployed; 1 - Yes; 2 = No; 9 = Not Available	_	79
	Card Number	3	80

SUMMARY DATA FORM: FOLLOW-UP OF INDUSTRY BASED PROGRAM

ID#

Card # 1

	Computer code	Col. #
	____	1-4
Sex: 1. Male 2. Female	____	5
A. Type of Handicap (check all that apply)		
1. Mentally Retarded	____	6
2. Learning disabled, brain injured	____	7
3. Emotionally handicapped, disturbed	____	8
4. Other, specify _____	____	9
B. Date of Birth ____/____ Month Year	____/____	10-13
C. IQ _____ Overall score; Date of test _____ Name of test _____	____	14-16
D. Educational level at intake (from folder)		
1. Elementary School		
2. Some High School		
3. High School graduate, diploma		
4. High School Equivalency, GED		
5. Some College	____	17
6. Other, specify _____		
7. Not clear or available from records, specify, _____		
E. Education prior to intake: (check all that apply)		
1. Regular classes		
2. Special classes _____		
3. Attended BOCES: Special Ed.	____	18
4. Attended BOCES: Occupational Ed.		
5. Not clear or available in records	____	19
F. Availability of transportation		
1. Drives own car		
2. Drives other car. Whose?		
3. Will be driven. By whom?		
4. Can use public transportation	____	20
5. Near public transportation	____	21
6. Other (must walk, etc. What?) _____		
G. Type of training prior to intake:		
1. a. Trade or field of training _____		
b. Number of years or length of training _____	____	22
c. Course completed? 1. Yes 2. No 3. not clear	____	23
	____	24
2. a. Trade or field of training _____		
b. Number of years or length of training _____	____	25
c. Course completed? 1. Yes 2. No 3. not clear	____	26
	____	27
3. Skill level of job training (DOT: skill level for job being trained for)		
____/____/____ 1st digit	____	28
middle 3 digits	____	29-31

SUMMARY DATA FORM,

Col.

H. Employment History (on Intake Form)

1. Date last employed prior to application at BOCES ___/___ 32-35

2. Last Job Title/Duties _____
(code DOT rating) ___/___/___ 1st digit middle 3 digits ___ 36 ___ 37-39
Employer _____

3. Longest Time Working at Any/Job _____
(in weeks) ___ 40-42

I. Counselor Assessment Rating Upon Entry:

Date of Rating ___/___

Code directly

Comments: Code as follows

1. Positive only
2. Positive, but needs help
3. Positive and Negative
4. Negative only
5. Irrelevant or no comments

Motivation	___	43
Comprehension/App. R	___	44
Appearance	___	45
Attention Span	___	46
Dexterity	___	47
Amenability	___	48
Follows Directions	___	49
Independence	___	50
Parental Attitude	___	51
Comments:	___	52

J. Skills Proficiency Rating
(by Counselor about 1 week after placement)

Occupation _____

Name of Employer _____

Date of Rating _____

Total Number of Skills Rated	___	53
Number of 1 (Excellent) Ratings	___	54
Number of 2 (Good) Ratings	___	55
Number of 3 (Satisfactory) Ratings	___	56
Number of 4 (Needs Improvement) Ratings	___	57
Average of Ratings	___	58
	1	80

Card # 2

SUMMARY DATA FORM,

ID # 1 2 3 4 K:

ATTITUDES, BEHAVIOR, AND WORK TRAITS 0

EVALUATOR: Please draw circle around numbers that are most appropriate.

5 **RELATIONSHIP WITH OTHERS**
1. Unable to determine at this time
2. Has difficulty with others
3. Gets along satisfactorily
4. Exceptionally well accepted

6 **COOPERATION**
1. Unable to determine at this time
2. Generally not cooperative
3. Generally cooperative
4. Exceptionally cooperative

7 **COURTESY**
1. Unable to determine at this time
2. Poor attitudes, needs improvement
3. Generally courteous
4. Exceptionally courteous and considerate

8 **DEPENDABILITY**
1. Unable to determine at this time
2. Needs constant follow-up
3. Generally accepts responsibility
4. Exceptionally reliable

9 **INITIATIVE**
1. Unable to determine at this time
2. Never initiates action
3. Seldom needs prodding
4. Exceptionally good "self-starter"

10 **JUDGMENT**
1. Unable to determine at this time
2. Often uses poor judgment
3. Usually makes the right decision
4. Above average in making decisions

11 **SELF-CONTROL**
1. Unable to determine at this time
2. Tends to be excitable
3. Well balanced
4. Exceptionally well balanced

12 **CONCENTRATION**
1. Unable to apply self to job at hand
2. Concentration fluctuates
3. Satisfactory concentration level
4. Highly satisfactory

13 **ADJUSTABILITY TO NEW JOB TASKS**
1. Cannot adjust to new assignments
2. Has difficulty adjusting
3. Adjusts adequately
4. Adjusts well to new assignments

MOTIVATION IN OCCUPATIONAL AREA 14
1. Unable to determine at this time
2. Lacks motivation
3. Average interest and application
4. Highly motivated

ADAPTABILITY 15
1. Unable to determine at this time
2. Has difficulty in adapting
3. Usually accepts change
4. Self-reliant, imaginative

DEXTERITY REQUIREMENTS FOR THE OCCUPATION 16
1. Unable to determine at this time
2. Prognosis for success is poor
3. Is well suited. Shows potential
4. Highly suited to needs of occupation

CRAFTSMANSHIP AND SKILLS 17
1. Unable to determine at this time
2. Substandard work
3. Average performance
4. High standards of performance

EFFICIENCY AND PRODUCTION 18
1. Unable to determine at this time
2. Often wastes time and effort
3. Makes effort to work effectively
4. A steady and productive worker

SAFETY 19
1. Unable to determine at this time
2. Lacks genuine concern for safety
3. Satisfactory practice of safety
4. High regard for safety requirements

WRITTEN PERFORMANCE 20
1. Unable to determine at this time
2. Work is seldom good
3. Work is generally good
4. Work is consistently good

TOLERANCE 21
1. Cannot tolerate many obstacles
2. Has difficulty with obstacles
3. Generally sticks to job
4. Sticks to job in face of obstacles

CONSISTENCY OF WORK BEHAVIOR 22
1. Very unstable work behavior
2. Generally more erratic than not
3. Showed moderately steady work behavior
4. Showed steady work behavior

Nassau BOCES 535-OE-375

SUMMARY DATA FORM,

L. Employer Ratings-First Placement

Occupation _____ (Code DOT rating)

Name of Employer _____

Date of Rating _____

		Col #
1. Employer Ratings of Clients at One-Month Follow-up on Job (Code from first JOB RATING) 1 = Excellent 2 = Good 3 - Satisfactory 4 = Needs Improvement	Appearance ___	23
	Attendance ___	24
	Attitude ___	25
	Communication ___	26
	Cooperation ___	27
	Initiative ___	28
	Performance ___	29
	Responsibility ___	30
	Conclusion: (overall rating) 1-4 comments ___	31
M. Application Date ___/___ (mo./yr.)	___/___	32 - 35
N. Referral agency: _____	___	36 - 37
O. 1st Successful Placement (Two or more months on job)		
1. Date Placed: (From)	___/___	38 - 41
2. Date Terminated: (To)	___/___	42 - 45
3. Skill Level of Placement ___/___/___	1st digit ___	46
	middle 3 digits ___	47 - 49
4. Salary hour	___	50 - 52
week	___	53 - 55
P. Number of Total Placements	___	56
Q. Number of Successful Placements	___	57
R. Dates of Other Placements 1.	___/___	58 - 61
2.	___/___	62 - 65
3.	___/___	66 - 69
4.	___/___	70 - 73
5.	___/___	74 - 77
	Card Number 2	80

APPENDIX D

GROUP MEANS: EMPLOYMENT OUTCOMES

*GROUP MEANS: PERCENT OF MONTHS EMPLOYED
AT FOLLOW-UP
(N=315)

Time Wave	Major Handicap: MR	LD	EH	OTHER
Long-term I (1973-77) N=88	71%	86%	65%	72%
II (1977-80) N=68	60%	68%	52%	63%
III (1980-82) N=91	78%	73%	58%	59%
Short-term IV(1982-83) N=68	90%	96%	64%	81%

*Group Mean of Months Employed divided by 12 months for Time Wave IV and divided by 24 for Time Waves I, II and III

*GROUP MEANS: MONTHS EMPLOYED
AT SHORT- AND LONG-TERM FOLLOW-UP

Time Wave	Major Handicap: MR	LD	EH	OTHER
Long-term I (1973-77) N=88	16.96	20.56	15.50	17.33
II(1977-80) N=68	14.32	16.25	12.58	15.12
III(1980-82 N=91	18.68	17.57	14.00	14.15
Short-term IV(1982-83) N=68	10.83	11.54	7.69	9.75

*Maximum months employed for Time Wave IV was 12 months and for maximum for Time Waves I, II and III was 24 months

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