

**EMPLOYMENT SURVEY
FOR ADULTS WITH
DEVELOPMENTAL DISABILITIES**

A National Survey
November, 1988

The Training and Research Institute for Adults with Disabilities

in conjunction with

The Developmental Evaluation Clinic
A University Affiliated Facility

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Employment Survey for Adults With Developmental Disabilities

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INTRODUCTION

The movement toward expanding integrated employment opportunities for persons with disabilities has been a national priority for several years (Kiernan & Stark, 1986; Rusch, 1986; Schalock, 1983; Wehman, 1981). Activities sponsored by the federal government through the Office of Special Education and Rehabilitative Services (OSERS, Department of Education) and the Administration on Developmental Disabilities (ADD, Department of Health and Human Services) have encouraged the expansion of nonsheltered employment training programs, particularly supported employment (Bellamy, Rhodes, Mank & Albin, 1988; McLoughlin, Garner & Callahan, 1987). Many states have modified their approaches to employment for persons with developmental disabilities by implementing supported, transitional and competitive employment options in nonsheltered settings. A parallel movement has occurred in special education with the focus on transition from school to integrated employment (Schalock, 1986; Wehman, Moon, Everson, Wood & Barcus, 1988). Overall, the philosophical shift from segregated work or day program settings to integrated work settings has affected service planning for individuals:

- . transitioning from school to work;
- . currently in sheltered employment;
- . currently in work activity or day habilitation programs and previously perceived as too disabled to achieve employment.

In an effort to document employment outcomes for adults with developmental disabilities, the Developmental Evaluation Clinic, a University Affiliated Facility at Boston Children's Hospital, conducted a national study of the placement activities of facilities, organizations and agencies in 1986 (Kiernan, McGaughey & Schalock, 1986). The placement activities of more than 3,137 agencies, organizations and facilities providing vocational services to adults with developmental disabilities were surveyed. Two-thirds of the organizations received the General Survey which solicited aggregate outcome data. The remaining one-third received the Detailed Survey which requested client-referenced data. This national survey documented the placement of individuals with developmental disabilities into transitional training/employment, supported employment and competitive employment over a 12 month period (October 1, 1984 to September 30, 1985).

Table 1 presents the findings of the General Survey (responding facilities = 806),

 Refer to Table 1

including the number of persons employed in full and part-time employment (20,050 individuals), average age, wages per hour, hours per week and yearly placement comparisons for the 12 month period. Placement into transitional and supported employment occurred more often on a part-time basis, whereas placement into competitive employment occurred more often on a full-time basis. Additionally, there was a continual increase in earnings and hours worked for persons placed into transitional, supported and competitive employment (with transitional settings having the lowest outcomes). Finally, comparison data show that placements in this survey period increased for all types of employment with the greatest increase in part-time employment.

Data were collected also on persons in sheltered employment. The employment status indicated that 32 percent of the persons in sheltered employment worked full-time, while 68 percent worked part-time. Earnings were analyzed in relation to hours of employment. Full-time persons averaged 30.5 hours per week at \$1.47 per hour, and part-time persons averaged 23.3 hours per week at \$1.24 per hour. More than 50 percent of those in sheltered employment received an hourly wage of \$1.09 per hour or less.

Because measures of employment retention are as important as placement indicators, a competitive employment retention measure was calculated. Seventy-seven percent of those in competitive employment remained for 60 days or more. Another analysis revealed

Table 1

Employment Data for Adults with Developmental Disabilities
Placed Into Transitional, Supported or Competitive Employment
(Oct. 1, 1984 - Sept. 30, 1985)

Variable	Employment Environments		
	Transitional Training/Employment	Supported Employment	Competitive Employment
1. Number Placed:			
Full Time	2,797	1,440	7,521
Part Time	3,201	2,464	2,627
2. Average Age at Placement: (Weighted Means)	29.0 (\pm .09) ^a	30.8 (\pm .10)	28.6 (\pm .05)
3. Wages Per Hour: (Weighted Means)			
Full Time	\$2.67 (\pm .02)	\$3.16 (\pm .05)	\$3.96 (\pm .01)
Part Time	\$2.11 (\pm .02)	\$2.26 (\pm .02)	\$3.56 (\pm .01)
4. Hours Per Week: (Weighted Means)			
Full Time	35.8 (\pm .07)	35.7 (\pm .13)	38.3 (\pm .03)
Part Time	19.9 (\pm .17)	19.2 (\pm .20)	20.8 (\pm .14)
5. Yearly Placement Comparisons			
Full Time:			
1983-84	1,737	1,020	4,993
1984-85	2,797	1,440	7,521
Part Time:			
1983-84	1,462	1,222	1,448
1984-85	3,201	2,464	2,627

^a Standard error of the mean

a 73 percent retention rate over a 22 week period, indicating that three out of four persons placed into competitive employment maintained their jobs longer than five months.

The present study was designed to continue documenting changes in the placement patterns and employment outcomes of adults with developmental disabilities. A secondary goal was to expand the scope of the earlier survey by collecting additional information regarding facility and environmental characteristics, staffing patterns, level of follow-up support and the level of integration experienced by persons placed into transitional training, supported or competitive employment.

METHOD

Sample Selection

The targeted sample for the 1987 *National Employment Survey For Adults with Developmental Disabilities* included vocational rehabilitation agencies and organizations/facilities which met one or both of the following criteria during the survey period: (1) placing adults with developmental disabilities in transitional, supported or competitive employment; and/or (2) providing sheltered employment for adults with developmental disabilities. These employment options were defined as follows:

- 1) **Sheltered employment.** Employment utilizing work environments where only persons with disabilities are employed and where payment is customarily at less than the minimum wage;
- 2) **Transitional training/employment.** Employment which provides time-limited support leading to competitive employment (may include work/employment training stations, on-the-job training or enclaves) and where payment is often less than the minimum wage;
- 3) **Supported employment.** Employment which requires intensive ongoing support, utilizes work environments where persons without disabilities are employed and where payment is often less than the minimum wage;
- 4) **Competitive employment.** Unsubsidized employment (including certain enclaves, work crews and regular jobs with time-limited follow-along services) where payment is at or above the minimum wage.

The sample included facilities surveyed the preceding year adjusting for address duplications or branch offices (N=193) and for facilities which reported they did not provide vocational services to adults with developmental disabilities (N=353). Thus, the total sample included 2,591 organizations that potentially met the survey criteria.

Survey Instruments

In developing any survey instrument, the conflict between the amount of data desired by the investigators and the amount that can be expected from respondents necessitates careful review of the research design. As in the previous year, the sample was clustered by state and then randomly subdivided. Specific client-referenced data were requested from one group (Detailed Survey), while the remaining group (General Survey) was asked to provide less comprehensive information. These procedures were engaged to enhance total response rates while maximizing the quality and amount of information received.

General Survey

Maintaining the state by state groupings, two-thirds of the sample list were selected randomly to receive the General Survey (1,724 agencies). Following adjustments for branch offices and for letters returned without forwarding addresses, 1,640 facilities remained in the sample. The General Survey requested aggregate data on the number of persons placed, average age, age range, wages and hours worked per week in transitional training, supported and competitive employment. Types of occupations were requested for competitive and supported placements. Total persons served, wages per week and hours worked were solicited for sheltered employment. Finally, agency characteristics such as total persons served, number of persons with developmental disabilities, average monthly hours of follow-up support per placement setting during the most recent month, gross operations budget, number and categories of full time equivalent (FTE) staff, referral arrangements with area schools, geographic environments, population of the agency "catchment area," perceived unemployment rate for the area served and perceived barriers to employment were requested.

As a guide for respondents the survey defined *developmental disabilities* as:

- 1) a chronic disability attributable to a mental or physical impairment or both;
- 2) manifest before the age of 22;
- 3) likely to continue indefinitely;
- 4) resulting in substantial limitation in three or more areas of life activity, including self care, receptive and expressive language, learning, mobility, self direction, capacity for independent living or economic self sufficiency; and
- 5) reflecting the need for a combination and sequence of special, interdisciplinary or generic care, treatment or other services which are of life-long or extended duration.

A copy of the General Survey as well as other definitions provided to respondents are found in the Appendix.

 Refer to the Appendix

Detailed Survey

The remaining agencies, organizations and/or facilities on the master list (867) received a survey soliciting individual client data. This sample was likewise adjusted for address duplications, branch offices and lack of forwarding addresses, yielding a total of 835. The Detailed Survey requested the same agency characteristics as the General Survey. Aggregate data were requested for sheltered employment (number served, wages per week and hours worked). In addition, this survey solicited the following client referenced data for persons placed into transitional, supported or competitive employment: age, gender, IQ level, whether SSI or SSDI was received, setting prior to placement, placement date, type of placement, level of integration of the placement setting, hourly wages, hours worked per week, hours of job support provided in the most recent month, termination date (if applicable) and employment environment as of 9/30/86.

Level of integration of the placement setting was defined as follows:

- . **Full Integration:** works along with non-handicapped workers and has opportunities for integration at breaks and lunch.
- . **Partial Integration:** no integration during work, but has opportunities for integration at breaks and lunch.
- . **No Integration:** no integration during work and no opportunities for integration at breaks or lunch.

A copy of the Detailed Survey may be found in the Appendix.

 Refer to the Appendix

Survey Procedure

Both survey instruments were mailed to the respective samples in late January, 1987. Two weeks later, reminder postcards were sent to all nonrespondents. Four weeks after the initial mailing, nonrespondents received another copy of the questionnaire. Telephone follow-up of nonrespondents began 5 weeks after the first mailing; calls were completed with 1,083 (78 percent) of the combined nonrespondents for both surveys. Of the total nonrespondents, 49 agencies receiving the General Survey and 24 of the Detailed Survey recipients reported they did not meet the survey criteria of providing employment services to adults with developmental disabilities. Each questionnaire was edited upon receipt. Facilities which provided inconsistent or unclear information were contacted by telephone for clarification. Validation procedures for data entry were conducted with a recorded error rate of less than .05 percent.

RESULTS

The data obtained from the General and Detailed Surveys were analyzed to provide information related to the following areas of interest:

- (1) the current placement activities among agencies providing vocational services to adults with developmental disabilities;
- (2) sheltered employment placement and earnings;
- (3) earnings data for persons in transitional training, supported or competitive employment environments;
- (4) the occupational categories utilized;
- (5) movement patterns prior to and following placement;
- (6) employment retention;
- (7) facility characteristics related to placement activities;
- (8) receipt of Social Security; and
- (9) levels of integration achieved.

Placement Data

The General Survey yielded a 46.2 percent response rate with 757 organizations responding. Of these respondents, 82 did not meet the survey criteria and six had missing placement data and were dropped from the analyses. In the Detailed Survey, 337 facilities responded, a 40.4 percent rate of return; 49 of these respondents did not meet the survey eligibility guidelines and five were not included in subsequent analyses due to missing placement data. Thus, a total of 952 facilities provided data for the surveys (669 for the General Survey and 283 for the Detailed Survey). Table 2 presents the number of persons served as reported from each survey.

 Refer to Table 2

Table 3 summarizes the placement data for the 96,626 adults with developmental

 Refer to Table 3

disabilities served by state and territory. These data represent the combined totals as reported on the General and Detailed Surveys. Collapsing across states, 302 of the 952

Table 2
Number of Persons Served in Reporting
Facilities Providing Vocational Services
(Oct. 1, 1985 - Sept. 30, 1986)

Population	General Survey	Detailed Survey	Combined
Total Number	106,417	38,842	145,259
Adults with DD	67,161	29,465	96,626
Percent Adults with DD	63.1%	75.9%	66.5%

Table 3
 Placement Data by State and Territory
 (General and Detailed Surveys Combined)

State and Number Returned ^a	Adults With Developmental Disabilities Served	<u>Total Placed (10/1/85 - 9/30/86) Into Employment Environment:</u>			
		Sheltered	Transitional	Supported	Competitive
Alaska (3)	125	69	0	27	14
Alabama (8)	1,503	293	82	16	207
Arkansas (13)	769	383	2	5	194
American Samoa (1)	7	14	6	0	0
Arizona (9)	590	272	43	27	93
California (75)	8,063	6,389	412	256	228
Colorado (18)	2,223	1,309	52	47	101
Connecticut (17)	5,076	2,594	347	369	355
Delaware (0)	0	0	0	0	0
D.C. (1)	103	42	0	0	36
Florida (27)	2,995	1,927	116	82	220
Georgia (17)	835	448	11	9	99
Hawaii (7)	525	182	7	48	66
Iowa (36)	2,480	1,874	55	152	171
Idaho (6)	326	227	4	7	30
Illinois (38)	4,786	2,773	172	211	600
Indiana (22)	2,454	2,155	44	30	262
Kansas (5)	406	362	2	12	37
Kentucky (11)	1,102	360	16	101	313
Louisiana (10)	638	334	77	20	46
Massachusetts (22)	1,596	813	133	246	248
Maryland (14)	1,191	764	153	57	124
Maine (12)	569	357	45	46	103
Michigan (24)	2,428	899	79	112	251
Minnesota (47)	3,812	3,289	228	401	165
Missouri (34)	2,305	2,297	11	3	56
Mississippi (9)	854	347	12	44	127
Montana (10)	431	330	81	40	4
N. Carolina (20)	2,183	779	78	47	235
N. Dakota (7)	525	437	40	21	65
Nebraska (14)	768	652	24	50	43

Table 3 (cont'd)

State and Number Returned ^a	Adults With Developmental Disabilities Served	Total Placed (10/1/85 - 9/30/86) Into Employment Environment:			
		Sheltered	Transitional	Supported	Competitive
New Hampshire (7)	549	435	3	63	52
New Jersey (21)	2,583	1,927	145	119	267
New Mexico (11)	458	378	12	26	18
Nevada (2)	282	282	30	0	15
New York (61)	9,466	7,254	375	280	593
Ohio (17)	5,872	4,604	207	58	407
Oklahoma (27)	1,173	993	146	58	104
Oregon (25)	1,325	823	77	55	95
Pennsylvania (49)	6,357	4,612	325	145	546
Puerto Rico (2)	48	29	11	0	5
Rhode Island (10)	750	579	61	28	39
S. Carolina (8)	929	663	110	21	80
S. Dakota (9)	869	549	9	14	74
Tennessee (23)	2,239	1,287	42	27	113
Texas (18)	2,694	1,823	64	173	323
Utah (7)	1,032	627	37	21	160
Virginia (22)	1,873	1,199	31	134	229
Virgin Islands (1)	9	9	0	0	6
Vermont (6)	221	120	3	20	66
Washington (42)	2,061	1,446	65	138	122
Wisconsin (34)	3,417	2,596	222	93	270
W. Virginia (12)	683	417	19	43	38
Wyoming (1)	68	66	0	0	10
TOTALS (952)	96,626	55,693	4,326	4,002	8,125
Percent of Total of Adults With Developmental Disabilities Served		57.6%	4.5%	4.1%	8.4%

^a The number returned includes only those surveys which met the survey criterion of providing vocational services to adults with developmental disabilities.

responding organizations (31.7 percent) indicated they provided transitional training employment; 376 (39.5 percent) provided supported employment; and 613 (64.3 percent) provided competitive employment. During the period from October 1, 1985 to September 30, 1986, 16,453 persons were placed into either transitional employment (4.5 percent of the persons with developmental disabilities served), supported employment (4.1 percent) or competitive employment (8.4 percent). The combined placement rate into nonsheltered employment was 17 percent.

Facilities were grouped by size (number of persons served) into nine categories to analyze the potential effect of facility size on placement rates. Tables 4 and 5 present these data. Table 4, which summarizes employment service patterns by organization size,

Refer to Table 4

indicates that facilities in the larger size categories served an increasingly smaller percentage of adults with developmental disabilities compared to the total served. Competitive employment was the most commonly utilized placement environment (64.3 percent of the facilities), followed by supported employment (39.5 percent) and finally, transitional employment (31.7 percent).

Table 5 summarizes placement data from October 1, 1985 to September 30, 1986 by

Refer to Table 5

facility size. Almost 50 percent of the actual job placements were in competitive employment, followed by 26 percent in transitional and 24 percent in supported. A placement rate was computed as follows:

Number of persons placed into the employment environment
Number of adults with developmental disabilities served

This placement rate was developed in order to examine the relationship between placement and a number of facility characteristics including facility size. As revealed in Table 5, the smallest facility size category (1-25 persons) had consistently larger placement rates into each of the three nonsheltered settings; the next smallest category (26-50 persons) had the second highest supported employment placement rate. Conversely, the largest size category (more than 200 persons) had the lowest supported employment placement rate.

Sheltered Employment Data

Both surveys included questions regarding employment status (full or part-time), wages and hours worked per week of persons in the facility's sheltered work setting. Table 6 summarizes these data for the two surveys. Full-time employment was defined as spending

Refer to Table 6

at least 35 hours per week in the program. The employment status indicates that 20.8 percent reportedly worked full-time in sheltered employment (average hours=36.99) and 79.2 percent worked part-time (average hours=27.04). However, the average hours of paid work per week were 29.03 for full-time status persons and 20.99 for part-time. Thus, the percentage of time spent on paid work was similar for both groups: 78.5 percent for persons working full-time and 77.6 percent for those working part-time. Individuals working full-time earned \$47.07 per week at the rate of \$1.62 per hour; those working part-time earned \$27.11 per week at the rate of \$1.30 per hour.

Table 4

Employment Service Patterns by Size of Organization
(General and Detailed Surveys Combined)

Facility Size (# Clients)	Total # Organizations	Total Persons Served Vocationally	Adults With DD Served	% Adults with DD Served	Number Organizations Providing		
					Transitional Training	Supported Employment	Competitive Employment
1-25	112 (12) ^b	1,849	1,725	93.3	31 (10) ^b	42 (11) ^b	38 (6) ^b
26-50	204 (21)	7,729	7,065	91.4	51 (17)	91 (24)	89 (15)
51-75	131 (14)	8,153	7,379	90.5	37 (12)	44 (12)	82 (13)
76-100	105 (11)	9,279	7,978	86.0	30 (10)	39 (10)	70 (11)
101-125	81 (9)	9,196	7,825	85.1	27 (9)	31 (8)	65 (11)
120-150	62 (7)	8,642	7,337	84.9	21 (7)	21 (6)	47 (8)
151-175	43 (5)	7,079	5,623	79.4	18 (6)	18 (5)	37 (6)
176-200	41 (4)	7,723	6,324	81.9	15 (5)	14 (4)	32 (5)
201+	172 (18)	85,609	45,330	53.0	72 (24)	76 (20)	152(25)
TOTALS	952	145,259	96,586 ^a		302	376	612

a This total differs from that reported in Table 1 due to no reported facility size on one survey.

b Percent within column.

Table 5
Placement Data By Size of Organization

Facility Size (# Clients)	# Adults With DD Served	Total Placed (10/1/85-9/30/86) into:			a Placement Rate For:			
		Transitional Training	Supported Employment	Competitive Employment	Transitional Training	Supported Employment	Competitive Employment	Total Placement Rate
1-25	1,725	232 (5) ^b	211 (5) ^b	218 (3) ^b	.134	.122	.126	.38
26-50	7,065	392 (9)	635 (16)	555 (7)	.055	.090	.079	.22
51-75	7,379	316 (7)	334 (8)	473 (6)	.043	.045	.064	.15
76-100	7,978	257 (6)	330 (8)	659 (8)	.032	.041	.083	.15
101-125	7,825	390 (9)	376 (9)	820 (10)	.050	.048	.105	.20
126-150	7,337	264 (6)	344 (9)	593 (7)	.036	.047	.081	.16
151-175	5,623	370 (9)	242 (6)	565 (7)	.066	.043	.102	.21
176-200	6,324	329 (8)	303 (8)	457 (6)	.052	.048	.072	.17
200+	45,330	1,776 (41)	1,227 (31)	3,771 (46)	.039	.027	.083	.15
TOTALS	96,586	4,326	4,002	8,125	Overall Rates	4.5%	4.1%	8.4%

a The placement rate was computed as follows:
The number of persons placed in the employment environment divided by the total number of adults with developmental disabilities served in the size category.

b Percent within column.

Table 6
Sheltered Employment Data
(October 1, 1985 - September 30, 1986)

Variable	General Survey	Detailed Survey	Combined
1. Employment Status			
Full Time	8,599	5,040	13,639
Part Time	33,553	18,501	52,054
2. Average Hours Worked on Paid Work			
Full Time	28.46	29.90	29.03
Part Time	21.31	20.19	20.90
3. Average Wage Per Week			
Full Time	\$41.10	\$55.80	\$47.07
Part Time	\$26.95	\$27.37	\$27.11
4. Average Wage Per Hour (weighted means)			
Full Time	\$1.44	\$1.87	\$1.62
Part Time	\$1.26	\$1.36	\$1.30
5. Average Hours In Program Per Week			
Full Time	36.79	37.29	36.99
Part Time	26.83	27.40	27.04

Examination of sheltered wages by percentile provides a slightly different perspective. For example, 50 percent of the 55,693 persons served in sheltered employment earned \$1.20 per hour or less. Less than 5 percent of those in sheltered employment earned more than \$3.40 per hour.

Employment Data For Persons Placed

Table 7 summarizes General and Detailed Survey data for persons placed into

Refer to Table 7

transitional training, supported or competitive employment from October 1, 1985 through September 30, 1986. A number of trends are apparent in these data. First, part-time status was more common in transitional training and supported employment, while the opposite was true for competitive employment. Second, the average age at placement differed across employment environments, with the youngest age in competitive employment. Third, average wages and hours worked per week increase consistently from transitional, to supported, to competitive employment.

Data from the surveys also were available regarding the primary diagnoses and disability levels of persons served. For the two surveys combined, 83.24 percent of the persons served had a primary diagnosis of mental retardation; 0.61 percent autism; 3.21 percent cerebral palsy; 2.33 percent epilepsy; and 6.78 percent other. (No data were reported for the remaining 3.8 percent). Data available from the Detailed Survey on 2,036 individuals reflecting level of disability are presented in Table 8. Less than one percent

Refer to Table 8

(0.4%) of the sample were reported to function cognitively in the profound range of retardation; 3.1 percent in the severe range; 18 percent in the moderate range; 42.5 percent in the mild range; and 36 percent were reported to have IQ's of 70 or above.

Placements by Occupational Categories

The types of jobs into which persons were placed were coded according to one-, two- and three-digit occupational categories from the Dictionary of Occupational Titles (D.O.T.) (U.S. Department of Labor, 1977). The D.O.T. codes provide three levels of specificity. The one-digit codes categorize job titles into very general occupational groups, whereas the two- and three-digit codes are increasingly more specific regarding the work performed.

These data are reported in the following four tables. Table 9 summarizes placements

Refer to Table 9

for the two surveys by the more general one-digit occupational categories. As shown in the table, 82.8 percent of the placements utilized clerical-sales, service or benchwork occupations.

A more specific listing of the job titles within these categories is found in Table 10,

Refer to Table 10

which summarizes placements by the two-digit occupational coding system. Only those job categories comprising one or more percent of the placements are included in Table 10. Two job categories represented the largest placement categories: food services (30.8 percent) and building/janitorial services (19.8 percent).

Table 7

Employment Data for Adults with Developmental Disabilities
Placed Into Transitional, Supported or Competitive Employment
(Oct. 1, 1985 - Sept. 30, 1986)^a

Variable	Employment Environments		
	Transitional Training/Employment	Supported Employment	Competitive Employment
1. Number Placed:			
Full Time	1,568	1,185	5,522
Part Time	2,758	2,817	2,603
2. Average Age at Placement: (Weighted Means)	28.95 ($\pm .11$) ^b	30.55 ($\pm .09$)	28.08 ($\pm .05$)
3. Average Hours Worked Per Week: (Weighted Means)			
Full Time	36.40 ($\pm .09$)	37.28 ($\pm .15$)	38.71 ($\pm .03$)
Part Time	20.02 ($\pm .17$)	20.67 ($\pm .18$)	22.32 ($\pm .14$)
4. Average Wage Per Week (Weighted Means)			
Full Time	\$110.29	\$117.43	\$153.68
Part Time	\$47.65	\$51.26	\$77.23
5. Average Wages Per Hour: (Weighted Means)			
Full Time	\$3.03 ($\pm .02$)	\$3.15 ($\pm .04$)	\$3.97 ($\pm .01$)
Part Time	\$2.38 ($\pm .02$)	\$2.48 ($\pm .02$)	\$3.46 ($\pm .01$)

a From General and Detailed Surveys

b Standard Error of the mean

Table 8

Disability Level, Age and Gender of Adults With
Developmental Disabilities In the Detailed Survey

Disability Level	Frequency	Average Age	Females (%)	Males (%)
Profound	8 (0.4) ^a	33.1	3 (.4) ^a	5 (.4) ^a
Severe	62 (3.1)	29.6	17 (2.0)	45 (3.7)
Moderate	367 (18.0)	30.1	150 (18.5)	217 (17.7)
Mild	865 (42.5)	29.6	379 (46.7)	486 (39.7)
70 or Above	734 (36.1)	28.7	263 (32.4)	471 (38.5)
TOTALS	2036	29.4 (\pm .69)	812	1224

^a Within column percent

Table 9
Competitive Placement by Occupational Categories^a
(Detailed and General Surveys Combined)

Category Label	Frequency	Percent	Cumulative Percent
1. Professional, Technical, Managerial	110	1.8	1.8
2. Clerical, Sales	744	12.0	13.8
3. Service	3643	58.7	72.5
4. Agriculture, Forestry, Fishing	177	2.9	75.3
5. Processing	105	1.7	77.0
6. Machine Trades	85	1.4	78.4
7. Benchwork	751	12.1	90.5
8. Structural Work	89	1.4	91.9
9. Miscellaneous	315	5.1	97.0
10. Other	<u>186</u>	<u>3.0</u>	100.0
Total:	6205	100.0	

^a As presented in the Dictionary of Occupational Titles (U.S. Department of Labor, 1977).

Table 10

Competitive Placement by Two-Digit Occupational Categories^a
(Detailed and General Surveys Combined)

Category Label ^b	Absolute Frequency	Relative Frequency Percent
Education	61	1.0
Steno, Typing, Filing	75	1.2
Computing, Accounts Record	103	1.7
Production, Stock Clerk	175	2.8
Information, Message Distribution	63	1.0
Clerical, Miscellaneous	227	3.7
Domestic Service	65	1.0
Food, Beverage Preparation, Service	1912	30.8
Lodging	176	2.8
Misc. Personal Service	157	2.5
Apparel, Furnish	70	1.1
Building Service	1228	19.8
Plant Farming	161	2.6
Assembly of Assorted Products	602	9.7
Transportation	70	1.1
Packaging and Materials Handling	213	3.4

^a As presented in the Dictionary of Occupational Titles (U.S. Department of Labor, 1977)

^b Only those job categories comprising one or more percent were included.

Data presented in Table 11, based on the three-digit D.O.T. coding system, reveal a

 Refer to Table 11

more detailed listing of job titles included in the top five categories reported. Food services, building services, lodging services, assembly and packaging/material handling represent occupations with the largest numbers of persons placed during the survey period (October, 1985 to September, 1986).

The one-digit code placement data obtained from the Detailed Survey also were analyzed according to occupational category and disability level (see Table 12).

 Refer to Table 12

Movement Patterns Within Employment Statuses

The Detailed Survey asked respondents to provide individually referenced data according to the person's setting prior to placement, the job environment placed into and the person's current employment environment. The prior setting and current employment environments included the following employment settings: transitional training, supported, competitive, sheltered, non-work (day program) and unemployment. These movement patterns are summarized in Table 13. Several trends are apparent in the tabled

 Refer to Table 13

data. First, the three most common settings prior to placement were sheltered employment, transitional employment and unemployment (84.8 percent). Second, the most common placement environment utilized was competitive employment (61.7 percent), followed by supported employment (20.9 percent) and transitional employment (17.4 percent). And third, 80.6 percent of the persons placed remained in either transitional, supported or competitive employment settings as of September 30, 1986, with 19.4 percent returning to either sheltered employment, non-work (day program) or unemployment statuses.

Employment Retention

Measures of job retention in supported and competitive employment were calculated for both sets of survey data. In the General Survey, respondents were asked, "From October 1, 1985 to September 30, 1986, how many adults with developmental disabilities were placed and remained on the job for more than 60 days?" Retention for the Detailed Survey also was based on maintaining a job for 60 days or longer. Supported and competitive employment retention rates were calculated for each facility as follows:

Number of persons retained for 60 days or longer
Number of persons placed in supported or competitive employment

Across surveys, the retention rate for supported employment was 0.783 (Detailed = 0.682, General = 0.798) and the retention rate for competitive employment was 0.76 (Detailed=0.669, General=0.779).

Table 14 provides state-by-state data on supported and competitive placement rates

 Refer to Table 14

Table 11

Competitive Placement by Three-Digit Occupational Categories^a
 (Detailed and General Surveys Combined)

Occupation	Absolute Frequency	Relative Frequency Percent
Food/Beverage Preparation & Service:		
Host/Hostess or Steward	1	0.0
Waiter	52	1.3
Chef/Cook	37	0.9
Meat Cutter	1	0.0
Kitchen Worker	456	11.0
Misc. Food & Beverage Preparation	1365	33.0
Lodging and Related Services:		
Housekeeper, Hotels	100	2.4
Housecleaning, Hotels	37	0.9
Bellhop	13	0.3
Miscellaneous Lodging Occupations	26	0.6
Building and Related Services:		
Porter, Cleaner	42	1.0
Janitor	1028	24.9
Miscellaneous Building Occupations	160	3.9
Assembly of Assorted Products:	599	14.5
Packaging and Materials Handling:		
Packaging	2	0.0
Moving and Storing Materials	7	0.2
Misc. packing & Materials Handling	204	4.9

^a Categories listed are those containing the highest number of placements.

Table 12

Placement by Occupational Category^a
and Disability Level
(Detailed Survey)

Occupational Category	Disability Level			
	Severe/Profound	Moderate	Mild	70 or Above
1. Professional, Technical, Managerial	0	6	21	18
2. Clerical, Sales	8	34	89	129
3. Service	51	253	558	385
4. Agriculture, Forestry, Fishing	1	17	49	38
5. Processing	1	5	6	5
6. Machine Trades	0	3	12	19
7. Benchwork	8	25	74	82
8. Structural Work	1	3	5	17
9. Miscellaneous	2	32	65	77
10. Other	0	7	33	32
Totals	72	385	913	802

^a As presented in the Dictionary of Occupational Titles (U.S. Department of Labor, 1977)

Table 13
 Movement Patterns Within Employment Statuses
 (Detailed Survey)

Employment Status	<u>Setting Prior to Placement</u>		<u>Job Environment Placed Into</u>		<u>Current Job Environment</u>	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Transitional Training	613	26.6	411	17.4	248	11.3
Supported	73	3.2	493	20.9	346	15.8
Competitive	76	3.3	1454	61.7	1173	53.5
Sheltered	911	39.5			184	8.4
Non-Work (Day Program)	201	8.7			17	0.8
Unemployed	432	18.7			224	10.2
Totals	2306		2358		2192	

Table 14
 Supported and Competitive Employment Placement
 and Retention Data by State
 (General and Detailed Surveys Combined)

State		Placement Rate		Retention Rate	
		Supported	Competitive	Supported	Competitive
Alaska	(3) ^a	.216	.112	.963	.786
Alabama	(8)	.011	.138	1.000	.603
Arkansas	(13)	.007	.252	1.000	.603
American Samoa	(1)	.000	.000	---	---
Arizona	(9)	.046	.158	1.000	.624
California	(75)	.032	.028	.820	.803
Colorado	(18)	.021	.045	.617	.762
Connecticut	(17)	.073	.070	.718	.544
D.C.	(1)	.000	.350	---	.750
Florida	(27)	.027	.073	.378	.800
Georgia	(17)	.011	.119	1.000	.667
Hawaii	(7)	.091	.126	.979	.803
Iowa	(36)	.061	.069	.724	.778
Idaho	(6)	.021	.092	.714	.767
Illinois	(38)	.044	.125	.701	.717
Indiana	(22)	.012	.107	.867	.744
Kansas	(5)	.030	.091	.333	.865
Kentucky	(11)	.092	.284	.950	.936
Louisiana	(10)	.031	.072	.350	.630
Massachusetts	(22)	.154	.155	.833	.835
Maryland	(14)	.048	.104	.947	.669
Maine	(12)	.081	.181	.891	.573
Michigan	(24)	.046	.103	.893	.865
Minnesota	(47)	.105	.043	.838	.594
Missouri	(34)	.001	.024	1.000	.554
Mississippi	(9)	.052	.149	.864	.961
Montana	(10)	.093	.009	.575	1.000
N. Carolina	(20)	.022	.108	.915	.791
N. Dakota	(7)	.040	.124	.714	.800
Nebraska	(14)	.065	.056	.780	.791

Table 14 (cont'd)

State		Placement Rate		Retention Rate	
		Supported	Competitive	Supported	Competitive
Nevada	(2)	.000	.053	---	1.000
New Hampshire	(7)	.115	.095	.921	.692
New Jersey	(21)	.046	.103	.471	.715
New Mexico	(11)	.057	.039	.962	.833
New York	(61)	.030	.063	.582	.761
Ohio	(17)	.010	.069	.897	.826
Oklahoma	(27)	.049	.089	.776	.788
Oregon	(25)	.042	.072	.891	.832
Pennsylvania	(49)	.023	.086	.655	.844
Puerto Rico	(2)	.000	.104	---	1.000
Rhode Island	(10)	.037	.052	.429	.744
S. Carolina	(8)	.023	.086	.952	.650
S. Dakota	(9)	.016	.085	1.000	.486
Tennessee	(23)	.012	.050	.926	.841
Texas	(18)	.064	.120	.682	.579
Utah	(7)	.020	.155	.905	.850
Virginia	(22)	.072	.122	.806	.847
Virgin Islands	(1)	.000	.667	---	.167
Vermont	(6)	.090	.299	1.000	.697
Washington	(42)	.067	.059	.928	.721
Wisconsin	(34)	.027	.079	.731	.874
W. Virginia	(12)	.063	.056	.953	.737
Wyoming	(1)	.000	.147	----	.500

a Number of completed, valid surveys returned.

and retention rates. Rates were aggregated either for all facilities within a particular state (Table 14) or for different facility size categories (Table 15).

The information contained in Table 14 enables comparison of states' competitive and supported employment placement and retention outcomes. However, these data should be interpreted with caution because, in some instances, the sample size is small (see Table 3 for actual number placed). The intent is to provide information that will illustrate general trends for planning purposes rather than for evaluation.

Placement and retention rates also were aggregated for different facility size categories. These rates, by facility size, are summarized in Table 15. Interestingly, even

Refer to Table 15

though smaller facilities placed more individuals into supported or competitive employment (as shown in Table 5), retention rates do not appear to differ systematically by facility size.

In order to analyze further the relationship between placement in and retention rates, an effectiveness ratio was computed for each facility using the following formula:

$$\text{Effectiveness Ratio} = \frac{\# \text{ of Persons Placed in supported \& competitive employment} + \# \text{ of Persons Retained 60 days or more in supp. \& comp. employ.}}{\# \text{ of Persons Served With Developmental Disabilities}}$$

A perfect score on this ratio would be 2, where 100 percent of those served were placed, and 100 percent of those placed were retained. Table 16 summarizes these facility ratios

Refer to Table 16

aggregated by facility size. A Scheffe Multiple Range Test indicated that the effectiveness ratio for the smallest size category was significantly larger than the other size categories. No other ratios were significantly different.

Facility Characteristics

Both surveys contained questions regarding facility characteristics and resources. Some of these characteristics were listed earlier in this report, including persons served (Table 2) and services provided (Table 4). The purpose of this section is to summarize additional factors related to the organizations surveyed including:

- (1) the geographic environment (estimated population of the service area and estimated unemployment rate);
- (2) staffing patterns;
- (3) whether there is a structured referral process from schools to the vocational/employment program, and if so, whether it is used;
- (4) perceived barriers to job placement.

1. Geographic environment. Across the two surveys, the largest number of respondents characterized the environment served by their program as rural (49.3 percent), followed by urban (31.2 percent) and suburban (19.4 percent). The average estimated unemployment rate across all geographic environments was reported to be 9.03 percent.

2. Staffing patterns. Three questions were asked on both surveys regarding staffing patterns:

Table 15
 Placement and Retention Rates By Facility-Size Category

(General and Detailed Surveys Combined)

Size	Number of Organizations	Placement Rate		Retention Rate	
		Supported	Competitive	Supported	Competitive
1-25	112	.122	.126	.716	.743
26-50	204	.090	.079	.778	.750
51-75	131	.045	.064	.928	.797
76-100	206	.041	.083	.797	.777
101-125	81	.048	.105	.809	.777
126-150	62	.047	.081	.613	.747
151-175	43	.043	.102	.777	.701
176-200	41	.048	.072	.766	.803
201+	172	.027	.083	.751	.753

Table 16
 Effectiveness Ratios by Facility Size Category
 (General and Detailed Surveys)

Facility Size (# of Clients)	Total # Organizations	Mean Ratio
0-25	63	.939 (\pm .09) ^a
26-50	138	.467 (\pm .04)
51-75	94	.315 (\pm .04)
76-100	84	.319 (\pm .04)
101-125	69	.363 (\pm .05)
126-150	52	.275 (\pm .05)
151-175	39	.287 (\pm .05)
176-200	36	.279 (\pm .05)
200+	158	.287 (\pm .03)
TOTAL	733	.390 (\pm .02)

^a Standard error of mean

- (1) What is the total number of full time equivalent (one person working 40 hours per week = 1.0 FTE) staff employed in all vocational/employment programs including sheltered employment?
- (2) Of that number, what percent provide direct services?
- (3) Of those providing direct services, how many FTE staff provide sheltered employment services?

These data are presented in Table 17. Across surveys, facilities reported an average of 20.94

Refer to Table 17

FTEs, 68.7 percent of whom provided direct services. Data in the lower portion of Table 17 summarize the FTE data by the nine facility size categories.

A second set of questions involved whether agencies provide staff support to clients following job placement. Staff support was defined as efforts expended by agency personnel to maintain the person's employment placement including training, assistance, support or supervision functions. Respondents were then asked to report the average hours of support provided per person during the most recent month in the three nonsheltered settings. Staff support was provided by 85.4 percent of the responding facilities. Facilities reported that, on average, they provided 11.23 (\pm 2.2) hours of support per month to those in competitive employment, 36.6 (\pm .82) hours per month to those in transitional training/employment, and 45.2 (\pm .84) hours of support to those in supported employment.

3. Referral process. Almost 63 percent (62.5) of the respondents indicated that a structured referral process existed between the school system and their vocational/employment program, and 96.1 percent indicated that they used it.

4. Potential barriers. Respondents were asked in both surveys to rank 11 potential barriers to job placement. The most frequent barrier was ranked #1, the second most frequent as #2, etc. These rankings were summed for each facility and a mean score was computed. Thus, the lowest score represents the most frequent barrier. The ranked barriers are presented in Table 18 for the two surveys combined. The top four perceived

Refer to Table 18

barriers included transportation, lack of appropriate jobs, employer attitudes and financial disincentives.

Receipt of Social Security

Questions were asked on both surveys regarding whether clients received SSI (Supplemental Security Income), an income transfer program for disabled persons based on economic need, or SSDI (Social Security Disability Insurance), a social insurance program for disabled workers based on past employment of self or parent. Across both surveys, the reported results were:

. Receives SSI only:	52.96 percent
. Receives SSDI only:	10.01 percent
. Receives both SSI and SSDI:	12.97 percent
. Receives No Support:	10.80 percent
. Data Unknown (or not reported):	13.26 percent

Individual SSI and SSDI response data also were available from the Detailed Survey. These are reported in Table 19. Approximately 55 percent of the persons reported in the

Refer to Table 19

Table 17
 Staffing Patterns (FTEs) For Reporting Facilities
 (General and Detailed Surveys)

Variable	Valid Number Responding	Mean FTEs (+ Standard Error)
Number of FTE Staff	900	20.94 (± 1.8)
Number of FTE Staff Providing Direct Service	884	14.38 (± 1.1)
Number of FTE Staff Providing Sheltered Service	872	7.89 (± 0.4)

Size Category		
0-25	101	5.06 (± 0.6)
26-50	190	7.62 (± 0.4)
51-75	126	12.46 (± 0.9)
76-100	104	13.62 (± 0.7)
101-125	75	18.97 (± 1.4)
126-150	61	24.89 (± 2.3)
151-175	43	25.96 (± 2.1)
176-200	39	25.88 (± 3.5)
200+	159	46.45 (± 4.2)

Table 18
Potential Barriers to Job Placement

Rank	Variable Description	Mean Ranking
1	Transportation	4.53
2	Lack of Appropriate Jobs	5.00
3	Attitude of Employer	5.82
4	Financial Disincentives	5.96
5	High Unemployment	6.37
6	Lack of Social Skills	6.42
7	Parental Concerns	6.50
8	Lack of Work Skills	6.90
9	Loss of Medical Benefits	7.19
10	Lack of Trained Staff	8.68
11	Staff Perceptions	9.90

Table 19
 Transfer Payment Receipt By Disability Level
 (Detailed Survey Only)

Disability Level	Receives SSI			Receives SSDI		
	Yes	No	Percent Receiving SSI	Yes	No	Percent Receiving SSI
Severe/Profound	31	6	(83.7)	6	27	(18.2)
Moderate	237	57	(80.6)	77	172	(30.9)
Mild	461	300	(60.6)	141	494	(22.2)
70 or Above	193	408	(32.1)	81	475	(14.6)
Totals	922	771		305	1168	
Percent	54.5	45.5		20.7	79.3	

Detailed Survey were receiving SSI, while those reported to have more severe disability levels (based on IQ) were more likely to receive SSI. Only 20.7 percent were reported to receive SSDI.

Level of Integration

Recipients of the Detailed Survey were asked to indicate the level of integration of each person placed into either transitional training, supported or competitive employment environments. The 3-point rating scale used was:

- 3 = works along with non-disabled workers and has opportunities for integration at breaks and lunch
- 2 = no integration during work but has opportunities for integration at breaks and lunch
- 1 = no integration during work and has no opportunities for integration at breaks or lunch

These data, which are summarized in Table 20, were analyzed for four variables: placement

 Refer to Table 20

setting, disability level, age and gender. The level of integration increased consistently with more competitive employment environments, higher intellectual (IQ) levels and younger age. There were no differences in the levels of integration between males and females.

DISCUSSION

Five general conclusions apply to the 1986 and 1987 surveys. First, more than half of the adults with developmental disabilities served were working in sheltered environments during the two survey periods (57.6% in 1986 and 68% in 1987). Second, in spite of the large percentage of persons in sheltered employment, placement rates into nonsheltered employment (19.9 percent combined placement rate in 1986 versus 17 percent in 1987) are much higher than those documented prior to the 1984 federal employment initiative (13.7%, U.S. Dept. of Labor; 1977). Third, the employment outcomes varied according to disability level and employment environment with higher monetary outcomes associated with less severe disability levels and more integrated employment environments. Fourth, most job placements continued to occur within service, benchwork or clerical/sales occupations. Fifth, competitive employment was utilized by the largest number of reporting facilities, followed by supported employment (third in the previous survey) and transitional training/employment. The implications of these and other findings are elaborated in the remainder of the Discussion Section.

Placement Data

The state-by-state comparison data summarized in Table 3 revealed that 16,453 persons with developmental disabilities were placed from October 1, 1985 to September 30, 1986 into one of the three non-sheltered employment environments. Of the total number of persons with developmental disabilities served, 8.4 percent were placed into competitive employment, 4.5 percent into transitional training and 4.1 percent into supported employment. The overall placement rate of 17 percent is lower than the rate obtained the previous year of 19.9 percent. However, it is possible that this reflects an attempt to place persons with more severe disabilities. Indeed, in the current survey, 21.4 percent of the sample had either moderate, severe or profound mental retardation, compared with 18.8 percent the previous year.

Table 20
Level of Integration Analysis
(Detailed Survey)

Variable	Level of Integration ^a		
	Works With Non-Handicapped (3)	Limited (2)	None (1)
Setting Placed Into:			
Transitional	45.3% ^b	30.8%	23.8%
Supported	57.5%	32.2%	10.3%
Competitive	96.1%	1.6%	2.3%
Disability Level:			
Profound	44.4%	44.4%	11.1%
Severe	58.7%	17.5%	23.8%
Moderate	72.9%	20.6%	6.5%
Mild	80.2%	15.6%	4.2%
70+	89.1%	7.4%	3.5%
Age Category:			
16-25	87.5%	8.9%	3.6%
26-35	78.9%	16.3%	4.8%
36-45	74.9%	20.5%	4.6%
46-55	71.1%	22.2%	6.7%
55+	72.7%	22.7%	4.5%
Gender:			
Female	82.1%	14.9%	3.0%
Male	82.8%	12.9%	4.4%

a Level of Integration:
 3 = works along with non-handicapped workers and has opportunities for integration at breaks and at lunch.
 2 = no integration during work, but has opportunities for integration at breaks and lunch.
 1 = no integration during work, and has no opportunities for integration at breaks or lunch.

b Read as 45.3 percent of clients placed into that employment environment were working with non-handicapped co-workers.

It is possible that the amount of support provided to persons placed into non-sheltered work environments challenges existing staff resources. As mentioned previously, facilities reported providing an average of 36.6 hours of job support per month to persons placed into transitional training employment and 45.2 hours per month to those placed into supported employment. The increased level of support needed by persons with more severe disabilities during and following placement also may have affected the reduced nonsheltered placement rate (Trach & Rusch, 1987).

It is concerning that only 6.5 percent of those placed into supported employment were reported to function in the severe or profound range of retardation given that the federal guidelines for supported employment are focused toward serving persons with severe disabilities who require intensive, ongoing supports. Though it must be acknowledged that the criterion for severe disability cannot be IQ alone, this finding may imply that the efforts to expand integrated employment options through the use of supported employment are compromised due to the use of this option with persons not requiring ongoing supports. Future research efforts need to document more closely the characteristics of the population served in this option noting existence of secondary disabilities, presence of significant negative or inhibiting social or work behaviors or existence of other factors which may justify the need for ongoing supports. The accessibility of nonsheltered employment to workers with the most severe disabilities needs careful examination and documentation.

One goal of the present survey was to examine the relationship between facility size and placement activities (summarized in Tables 4 and 5). Several patterns are apparent in these data. First, there is an inverse linear relationship between facility size and the percentage of persons with developmental disabilities served (see Table 4). Second, most facilities providing sheltered employment also made placements into competitive employment, but fewer than half utilized either transitional training or supported employment (see Table 4). Nonetheless, the percent of facilities providing supported employment placement increased between the two survey periods (from 32.6 percent in 1986 to 39.5 percent in 1987). And third, facilities in the smallest size category (1-25 persons) were most effective at placement, with 38 percent of their clientele placed into one of the non-sheltered employment environments during the one-year period (see Table 5). This finding was consistent with data from the previous year and implies that smaller facilities may be more single-focused and possibly more effective (as suggested by the effectiveness ratios in Table 16). Although these hypotheses were not tested systematically in the current survey, they need thorough examination in the future in order to design administrative structures that are capable of maximizing placement into nonsheltered employment.

Nonsheltered Employment Outcomes

The employment data summarized in Table 7 is quite consistent with that obtained in the previous year's survey (see Table 1 in the Introduction Section). For both survey periods, younger persons were more likely to be placed into competitive employment and slightly older persons into supported employment. However, given the recent federal emphasis on moving special needs students directly into supported employment from school settings, the average age of persons in supported employment may be much younger.

In general, wage and hour outcomes for the placement settings were higher than those obtained the previous year. The one exception was competitive wages, which averaged \$3.81 per hour and yielded a 1 percent decrease. This was caused primarily by a lower part-time wage and an increase in the number of part-time competitive workers. In contrast, the average supported employment hourly wage increased 4.2 percent (average per hour = \$2.70), and the average hourly transitional wage increased 11.8 percent (average per hour = \$2.65). Hours worked per week varied among the three employment settings

averaging 28.2 for transitional training, 28.9 for supported and 30.5 for competitive. Overall, these hours represent a 3.1 percent increase across the three placement environments compared with those obtained the previous year.

Sheltered Employment Outcomes

Several findings related to sheltered employment outcomes merit additional comment. One was the significant decrease in full-time status employees and the corresponding increase in part-time status. Based on the authors' personal experiences, persons placed into transitional or supported employment frequently also spend part of their time in sheltered work. The increased part-time status might reflect this practice, suggesting that a person's total wages may be higher than those reported in Table 7.

The second finding related to the percentage of time sheltered employees devoted to paid work. Full-time status employees spent 78.5 percent of their time in paid work and part-time persons in the workshop spent 77.3 percent, indicating similarities between the two statuses. It is unclear from the available data whether the remaining time reflects other services being offered or simply inconsistent work flow. This "undocumented time" should be examined in future research.

Last, because sheltered employment data are as important as placement data in determining progress toward nonsheltered employment, the percentage increase in persons served in sheltered settings is troubling. We need to determine why this pattern is occurring if we are to expand the development of integrated employment. Future research should continue to document sheltered employment outcomes as well as to identify factors which potentially contribute to the observed trends.

Occupational Categories

As shown in Table 9, 76.7 percent of placements, regardless of disability level, were represented by service, clerical-sales and benchwork occupational categories, compared with 68 percent of the placements in the previous survey. Thus, there appears to be fairly consistent utilization of these occupational categories for persons with developmental disabilities. However, the two- and three-digit codes in Tables 10-12 demonstrate that persons with developmental disabilities are being placed into a wide variety of jobs within those occupational categories. This finding should encourage job placement personnel to seek out widely disparate job placements and employment environments as they continue to interface economics, industry and persons with disabilities. (Kiernan & Schalock, 1988).

Movement Patterns Within Employment Statuses

Table 13 summarized the movement patterns within employment statuses including: setting prior to placement, placement environment and current employment environment. Prior to placement, 39.5 percent (vs. 45 percent in 1986) of those placed were in sheltered employment, 8.7 percent were in non-work (day) programs (not a category in 1980), 18.7 percent were unemployed (vs. 31 percent in 1986, most likely reflecting those in nonwork day programs), and 33 percent were in either transitional training, supported or competitive employment (vs. 24.6 percent in 1986).

Competitive employment was the most commonly utilized placement environment. However, the percentage placed was less than the previous year, while there was an increase in the percentage placed into supported employment. This finding, added to the fact that facilities reported providing 11.2 average hours of job support per month to persons in competitive employment, suggests a trend toward "generic employment with support services" with the level of support varying according to need.

Outcomes related to the current employment environment reflect movement patterns (Table 13, right column). Approximately 8.4 percent of those placed into nonsheltered employment returned to sheltered employment, 0.8 percent to non-work (day) programs, and 10.2 percent became unemployed. Thus, the combined 60 day retention rates from both surveys were: 77 percent for supported employment and 76 percent for competitive employment. Because some individuals may require even greater levels of support to maintain employment (Bellamy et al., 1988), the relationship between individual characteristics, indicators of the employment environment (including levels of support received) and retention should be examined more thoroughly.

Facility Characteristics

The relationship between facility characteristics and a variety of employment outcomes will be examined in subsequent multivariate analyses. It was interesting that almost half of the respondents characterized their programs as rural. Moreover, it was surprising that the average estimated unemployment rate was 9 percent, given that the national average at that time period was closer to 7 percent. Clearly, some facility staff overestimated the level of unemployment in their communities. A key policy question is whether staff perceptions of unemployment are inversely related to agencies' job development and placement activities.

Based on the staffing patterns summarized in Table 17, facilities reported an average of 14.7 full-time equivalent positions in direct services, with 54.9 percent working in sheltered settings. Whether the remaining direct-service staff were fulfilling job placement and job coach functions within nonsheltered settings is unclear from the data. Specific descriptions of staff utilization in nonsheltered employment should be obtained in the future, particularly given the high levels of support reportedly provided in the three placement settings.

The absence of a systematic referral process from schools to facilities reported by 37.5 percent of the respondents reflects the need for inter-agency agreements related to employment (Schalock, 1986). The utility of these agreements is underscored by the fact that they were used by 96.1 percent of the respondents when they were available.

Many issues have been raised regarding barriers to enhancing employment for adults with developmental disabilities. Though presenting a challenge, problems relating to transportation and lack of jobs have been resolved in many areas by creative use of existing resources and more effective marketing of the concept that this previously untapped labor resource can meet industry's needs (Kiernan & Schalock, 1988).

The enactment of the Title 1619 (a) and (b) amendments as permanent provisions of the Social Security Act in 1986 somewhat counteract the perceived barriers related to financial disincentives and loss of medical benefits. Title 1619 (a) and (b) provide encouragement for SSI recipients to work by reducing the impact of employment on cash payments and by reducing the threat of losing Medicaid benefits for employed recipients who cannot afford or do not receive health care benefits from the job. These changes are especially significant to persons with developmental disabilities because 54.5 percent of those placed receive SSI (see Table 19). However, because there are no similar provisions for SSDI recipients (10 percent of the sample receive SSDI only), economic disincentives still may impede employment for some individuals.

Finally, barriers which have been identified call for the application of more effective behavioral and technological skill training through the placement and support process. The development of positive employment outcomes will alter the perceptions of employers, staff, family and the individual. The realization and acceptance that

employment is an option for the adult with developmental disabilities must be developed if many of these barriers are to be resolved.

Level of Integration

The measure reflecting opportunities for integration with nondisabled persons in the employment setting was developed because of its relevance to service ideology (Taylor, 1988; Wolfensberger, 1980), to federal policy (Rehabilitation Act of 1986) and, ultimately, to the quality of life experienced by persons with developmental disabilities. Results from the Detailed Survey (summarized in Table 20) portray a mixed picture regarding integration outcomes. Some degree of integration with non-disabled persons was reported in 97.7 percent of the competitive employment sites, in 89.7 percent of the supported employment sites, but only in 76.2 percent of the transitional training/employment sites. Those supported employment settings which lack opportunities for integration (10.3 percent) would not meet the federal criteria for supported employment specified in the 1986 amendments to the Rehabilitation Act. Furthermore, the level of integration was greater for younger persons in competitive employment who had greater cognitive abilities (as measured by IQ). The influence of age may be related to the fact that younger individuals are more likely to have received training in an integrated vocational or educational setting as a result of special education legislation, and thus, may have developed more skills for interacting within nonsheltered environments. The negative relationship between IQ level and greater integration underscores the need for improved techniques which maximize employment integration for persons with severe disabilities (Bellamy *et al.*, 1988; Mank & Buckley, in press).

CONCLUSION

In conclusion, the present survey has documented the movement of adults with developmental disabilities into employment environments that offer greater opportunities for productivity, integration and economic benefits compared with sheltered settings. These benefits include increased tax revenue (income as well as sales and other usage taxes), reduced alternative program costs and reduced dependency on third-party supports. There are other benefits as well: industry realizes increased production and reduced job turnover costs; society realizes economic and humanitarian gains; and the person with developmental disabilities realizes increased disposable income, increased contact with non-disabled persons, and hopefully an improved quality of life (Kiernan & Schalock, 1988).

Still, although nonsheltered employment outcomes appear to be expanding, the system is a fragile one. The fact that the percentage of persons working in sheltered environments increased from the first to the second survey period underscores this point. Moreover, while a larger percentage of persons was placed into supported employment, a smaller percentage achieved competitive employment. We need safeguards to insure that individuals who previously would have entered competitive employment are not diverted to supported employment merely because of funding reasons. More importantly, fiscal incentives should be developed to encourage nonsheltered employment (regardless of the category) that provides adaptive, flexible supports according to individual needs in order to enhance performance and retention.

A stable, high quality network of integrated employment options for persons with disabilities cannot be accomplished without considerable effort. The achievement of these goals will require, at the very least, consistent and cooperative support from all who are committed to the outcome: policy makers, practitioners, advocates, families and consumers. Surely, the benefits of a truly responsive system will be worth this effort.

Appendix

Developmental Disabilities

A developmental disability:

- is a chronic disability attributable to a mental or physical impairment or both
- is manifested **before the age of 22**
- is likely to continue indefinitely
- results in substantial limitation in three or more of the following areas of life activity: self care, receptive and expressive language, learning, mobility, self direction, capacity for independent living, or economic self sufficiency
- reflects the need for a combination and sequence of special, interdisciplinary, or generic care, treatment or other services which are of life-long or extended duration.

Employment Status

- a) full time: employed 35 hours per week or more
- b) part time: employed less than 35 hours per week

Employment Service Options

- a) **Sheltered Employment.** Employment utilizing work environments where only persons with disabilities are employed and where payment is customarily at **less than** the minimum wage;
- b) **Transitional Training/Employment.** Employment which provides **time-limited support** leading to competitive employment (may include work/employment training stations, on-the-job training, or enclaves), where payment can be at **less than** the minimum wage;
- c) **Supported Employment.** Employment which requires **intensive ongoing support**, utilizing work environments where persons without disabilities are employed, where payment is **often less than** the minimum wage;
- d) **Competitive Employment.** Unsubsidized employment where payment is **at or above** the minimum wage (including certain enclaves, work crews, and employment in regular jobs when **time-limited** follow along services are provided).

Staff Support

Efforts expended by agency personnel to maintain the person's employment placement. Specific efforts can relate to training, assistance, support or supervision functions.

Opportunities for Integration with Non-Disabled Persons

- A = works along with non-handicapped workers and has opportunities for integration at breaks and lunch.
 B = no integration during work, but has opportunities for integration at breaks and lunch.
 C = no integration during work, and has no opportunities for integration at breaks or lunch.

FTE Staff: Full Time Equivalent Staff

Full time equivalent reflects 40 hours per week of work done. If one person works 40 hours per week their FTE would be 1.0. Three part-time workers at twenty hours per week represent 1.5 FTE.

SSI and SSDI (cash payments)

SSI (Supplemental Security Income). An income maintenance program for disabled persons **based on economic need** (combines state and federal resources)

SSDI (Social Security-Disability Insurance). A social insurance program for disabled workers **based on past employment** of self or parent.

SURVEY

EMPLOYMENT OF ADULTS WITH DEVELOPMENTAL DISABILITIES

Name of Organization: _____

Address: _____

City/State/Zip Code: _____

County: _____

Telephone Number: _____

Name of Person Completing Survey: _____ Title: _____

Utilizing the attached definitions for reference, please answer all questions as accurately as possible.

ALL QUESTIONS REFER TO PERSONS SERVED FROM 10-1-85 to 9-30-86

1. How many persons did your organization provide vocational/employment services to from October 1, 1985 to September 30, 1986? _____

- a) If you serve adults with developmental disabilities but do not provide any vocational/employment services, check here. _____
- b) If no adults with developmental disabilities were served, check here. _____

If a) and b) are NOT checked, please continue. If either is checked, you have completed the survey. Please return it.

- c) Of the number of persons you served, how many would by definition be considered developmentally disabled? _____
- d) Of your developmentally disabled clients, what percent have a **primary diagnosis** of:
 _____ mental retardation _____ autism _____ cerebral palsy _____ epilepsy _____ other
- e) What percent of your clients receive:
 _____ SSI only _____ SSDI only _____ both SSI and SSDI _____ No support _____ Percent unknown

2. From October 1, 1985 to September 30, 1986, how many adults with developmental disabilities were placed in:

	Full-time	Part-time
a) transitional training/employment	_____	_____
b) supported employment	_____	_____
c) competitive employment	_____	_____

3. From 10-1-85 to 9-30-86, how many adults with developmental disabilities were placed and remained on the job for more than 60 days in:

	Full-time	Part-time
Supported Employment	_____	_____
Competitive Employment	_____	_____

4. How many adults with developmental disabilities **are currently** being served in your **supported employment** program (including number placed during the survey period)? _____

5. Of those adults with developmental disabilities placed from 10-1-85 to 9-30-86, what is the:

- a) average (mean) age at the time of placement in:
 - transitional training/employment _____ years of age
 - supported employment _____ years of age
 - competitive employment _____ years of age
- b) age range (youngest to oldest) at time of placement in:
 - transitional training/employment _____ years of age
 - supported employment _____ years of age
 - competitive employment _____ years of age

6. Of those adults with developmental disabilities who were placed in employment from 10-1-85 to 9-30-86, at the time of placement what was:

	Full-time	Part-time
a) the average wage per hour for:		
transitional training/employment	\$ _____ /hr	\$ _____ /hr
supported employment	\$ _____ /hr	\$ _____ /hr
competitive employment	\$ _____ /hr	\$ _____ /hr
b) the average # of hours worked per week in:		
transitional training/employment	_____ hrs/wk	_____ hrs/wk
supported employment	_____ hrs/wk	_____ hrs/wk
competitive employment	_____ hrs/wk	_____ hrs/wk

7. If you are providing a **sheltered employment setting (see definition)** for adults with developmental disabilities:

Full-time Part-time 40

- a) How many were served from 10-1-85 to 9-30-86? _____
- b) What was the average wage per week? \$ _____ /wk \$ _____ /wk
- c) Average hours in program per week? _____ hrs/wk _____ hrs/wk
- d) Average hours worked on paid work per week? _____ hrs/wk _____ hrs/wk

- 8. Do you provide staff support (see definition) to clients following job placement? _____ Yes _____ No
- If yes, what is the average number hours of support given per client per month in:
 - transitional training/employment: _____ hrs/mo
 - supported employment: _____ hrs/mo
 - competitive employment: _____ hrs/mo

9. What is your **total annual operating cost** (excluding client wage payments) for all vocational/employment programs (including sheltered employment)? \$ _____ annually

10. In reference to your organization:

- a) What is the total number of full time equivalent (see definition) staff employed in all vocational/employment programs (including sheltered employment)? _____ FTE
- b) Of that number, how many FTE staff provide direct services? _____ FTE
- c) Of those providing direct services, how many FTE staff provide sheltered employment services? _____ FTE
- d) Is there a structured referral process from schools to your vocational/employment program?
 - _____ Yes _____ No
 - _____ Yes _____ No
- e) If yes is checked in 'd' above, is it utilized? _____ Yes _____ No
- f) Check the **primary** geographic environment served by your program? _____ Urban _____ Suburban _____ Rural
- g) What is the population of the area you serve? _____ Persons
- h) What is the estimated unemployment rate in the area you serve? _____ %

11. Please rank order the following potential barriers to job placement in your area. Rank the most frequent barrier as #1, the second most as #2, etc.

- | | | |
|--------------------------------|--------------------------------|-------------------------|
| Attitude(s) of employer _____ | Lack of social skills _____ | Parental concerns _____ |
| Financial disincentives _____ | Lack of trained staff _____ | Staff perceptions _____ |
| High unemployment _____ | Lack of work skills _____ | Transportation _____ |
| Lack of appropriate jobs _____ | Loss of medical benefits _____ | Other (specify) _____ |

12. Please list the types of **competitive and supported jobs** in which adults were placed and the number of placements for each.

Title	Number Placed
Competitive Placements	
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
Supported Placements	
_____	_____
_____	_____
_____	_____
_____	_____

Please attach additional page if necessary.

SURVEY

EMPLOYMENT OF ADULTS WITH DEVELOPMENTAL DISABILITIES

Name of Organization: _____

Address: _____

City/State/Zip Code: _____

County: _____

Telephone Number: _____

Name of Person Completing Survey: _____ Title: _____

Utilizing the attached definitions for reference, please answer all questions as accurately as possible.

ALL QUESTIONS REFER TO PERSONS SERVED FROM 10-1-85 to 9-30-86

1. How many persons did your organization provide vocational/employment services to from October 1, 1985 to September 30, 1986? _____

- a) If you serve adults with developmental disabilities but do not provide any vocational/employment services, check here. _____
- b) If no adults with developmental disabilities were served, check here. _____

If a) or b) are NOT checked, please continue. If either is checked, you have completed the survey. Please return it.

- c) Of the number of persons you served, how many would by definition be considered developmentally disabled? _____
- d) Of your developmentally disabled clients, what percent have a **primary diagnosis** of:
 _____ mental retardation _____ autism _____ cerebral palsy _____ epilepsy _____ other
- e) What percent of your clients receive:
 _____ SSI only _____ SSDI only _____ both SSI and SSDI _____ No support _____ Percent unknown

2. If you are providing a **sheltered employment setting** (see definition) for adults with developmental disabilities:

	Full-time	Part-time
a) How many were served from 10-1-85 to 9-30-86?	_____	_____
b) What was the average wage per week?	\$ _____/wk	\$ _____/wk
c) Average hours in program per week?	_____hrs/wk	_____hrs/wk
d) Average hours worked on paid work per week?	_____hrs/wk	_____hrs/wk

3. How many adults with developmental disabilities **are currently** being served in your **supported employment** program (including number placed during the survey period)? _____

4. What is your **total annual operating cost** (excluding client wage payments) for all vocational/employment programs (including sheltered employment)? \$ _____ (annually)

5. In reference to your organization:

- a) What is the total number of full time equivalent (see definition) staff employed in all vocational/employment programs (including sheltered employment)? _____ FTE
- b) Of that number, what percent provide direct service? _____ FTE
- c) Of those providing direct services, how many FTE staff provide sheltered employment services? _____ FTE
- d) Is there a structured referral process from schools to your vocational/employment program? _____ Yes _____ No
- e) If yes is checked in 'd' above, is it utilized? _____ Yes _____ No
- f) Check the typical geographic environment served by your program? _____ Urban _____ Suburban _____ Rural
- g) What is the population of the area you serve? _____ Persons
- h) What is the estimated unemployment rate in the area you serve? _____ %

6. Please rank order the following potential barriers to job placement. Rank the most frequent barrier as #1, the second most as #2, etc.

Attitude(s) of employer _____	Lack of social skills _____	Parental concerns _____
Financial disincentives _____	Lack of trained staff _____	Staff perceptions _____
High unemployment _____	Lack of work skills _____	Transportation _____
Lack of appropriate jobs _____	Loss of medical benefits _____	Other (specify) _____

On the reverse side, please indicate each individual using ID numbers, starting with 1. **Each row should reflect a specific placement** made during the time period (10/1/85 thru 9/30/86). For persons with more than one placement, use the same ID number for the individual and a separate letter and row to indicate each placement (see example below). Use the letters in the key at the bottom to complete the appropriate columns.

Example:	ID Number	Job Title
(Jones)	1 (a)	Dishwasher
(Jones)	1 (b)	Cleaning

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