

#### **4. Comparisons Across Time of Engagement in Postsecondary Education or Employment of Out-of-High School Youth With Disabilities**

Employment and postsecondary school attendance have been the primary focus of research and policies related to transition from high school to early adulthood (e.g., Benz, Doren, and Yovanoff 1998; Johnson et al. 2002; Rusch et al. 1992; Savage 2005; Sitlington, Clark, and Kolstoe 2000; Stodden 2001). Each of these activities, individually, has been considered as a productive and valued measure of a successful transition. Chapters 2 and 3 of this report describe differences in involvement between 1990 and 2005 in these two post-high school outcomes—employment and postsecondary education—separately.

However, some young adults engage in one of these activities but not in the other. For example, some might spend their early post-high school years attending postsecondary school but are not employed. To provide a broader understanding of the extent to which young adults are productively engaged in their communities, this chapter focuses on a broader measure of successful transition—the combination and the overlap of these two types of engagement—employment and postsecondary education. Addressing this broader concept of engagement, rather than considering individual outcomes separately, was encouraged by the advisory panel during the design of the initial NLTS; as a result, NLTS was one of the first studies to present a broader perspective on how youth and young adults with disabilities could be productively engaged in their communities. The advisory panel for the current study continued to endorse that view of engagement.

The importance of this broader view of what constitutes a successful transition is now incorporated in the current federal policy that requires states to collect data on post school outcomes (“Indicator 14”): “the percent of youth who had IEPs, are no longer in secondary school, and who have been competitively employed, enrolled in some type of postsecondary school, or both, within one year of leaving high school” [20 U.S.C. 1416(a)(3)(B)].

In this chapter, youth with disabilities who had been out of high school from 1 to 4 years are considered engaged in school or work if they had participated in one or both of the following activities at the time of the interviews:<sup>51</sup>

- Employment—worked for pay, other than work around the house, including supported or sheltered employment.
- Education—attended a vocational, business, or technical school; a 2-year, junior, or community college; or a 4-year college or university.

#### **Engagement in School or Work**

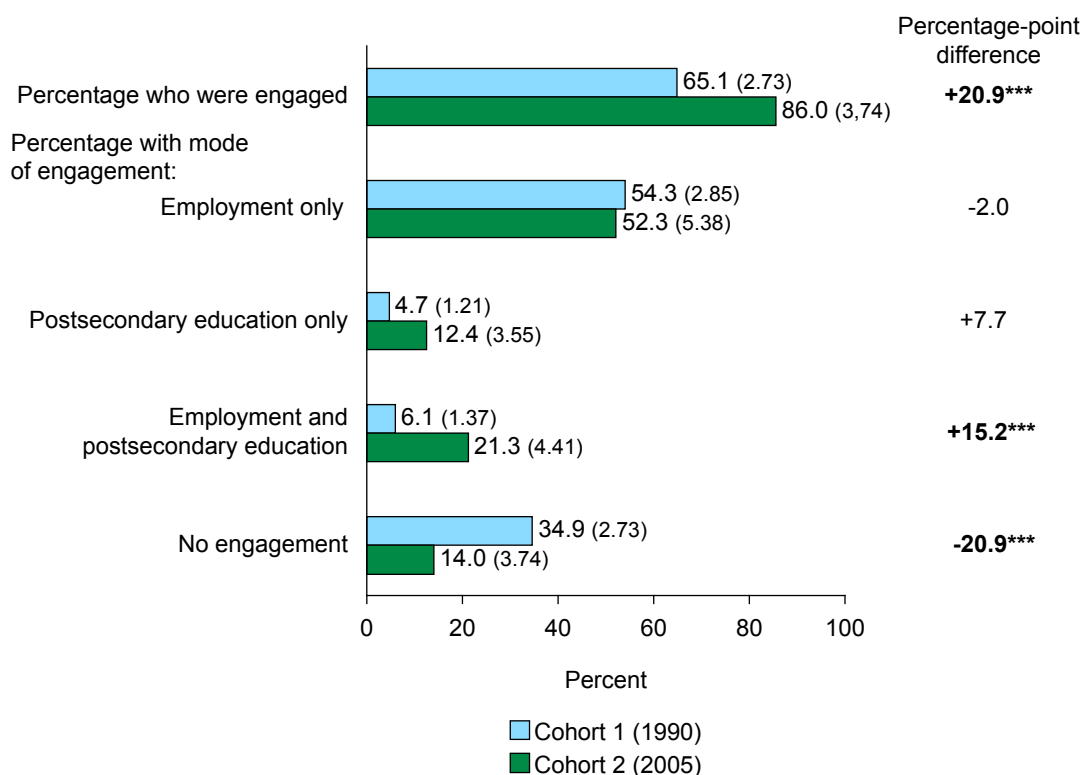
Youth with disabilities who had been out of high school from 1 to 4 years in 2005 (cohort 2) were more likely to have been reported to be engaged in school or work at the time of the

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<sup>51</sup> The focus of this chapter is limited to employment and/or postsecondary education at the time of the interview, rather than since high school, because differences in the NLTS and NLTS2 datasets did not support comparisons of employment rates since high school across the two studies.

interview than were those in 1990 (cohort 1; figure 12).<sup>52</sup> In cohort 1, 65 percent were reported to be employed and/or attending postsecondary school at the time of the interview, as compared with 86 percent in cohort 2, a 21 percentage-point difference between cohorts ( $p < .001$ ).

Figure 12. Comparisons between 1990 and 2005 in engagement in postsecondary education and/or employment at the time of the interview for youth with disabilities out of high school 1 to 4 years



\*\*\*  $p < .001$ .

NOTE: Standard errors are in parentheses. Findings are reported for youth with disabilities who had been out of high school 1 to 4 years. NLTS percentages are weighted population estimates based on a sample of approximately 1,740 youth with disabilities across variables. NLTS2 percentages are weighted population estimates based on a sample of approximately 1,050 youth with disabilities across variables.

SOURCE: U.S. Department of Education, Office of Special Education Programs, National Longitudinal Transition Study (NLTS), Wave 2 parent/youth interview, 1990; U.S. Department of Education, Institute of Education Sciences, National Center for Special Education Research, National Longitudinal Transition Study-2 (NLTS2), Wave 3 parent interview and youth interview/survey, 2005.

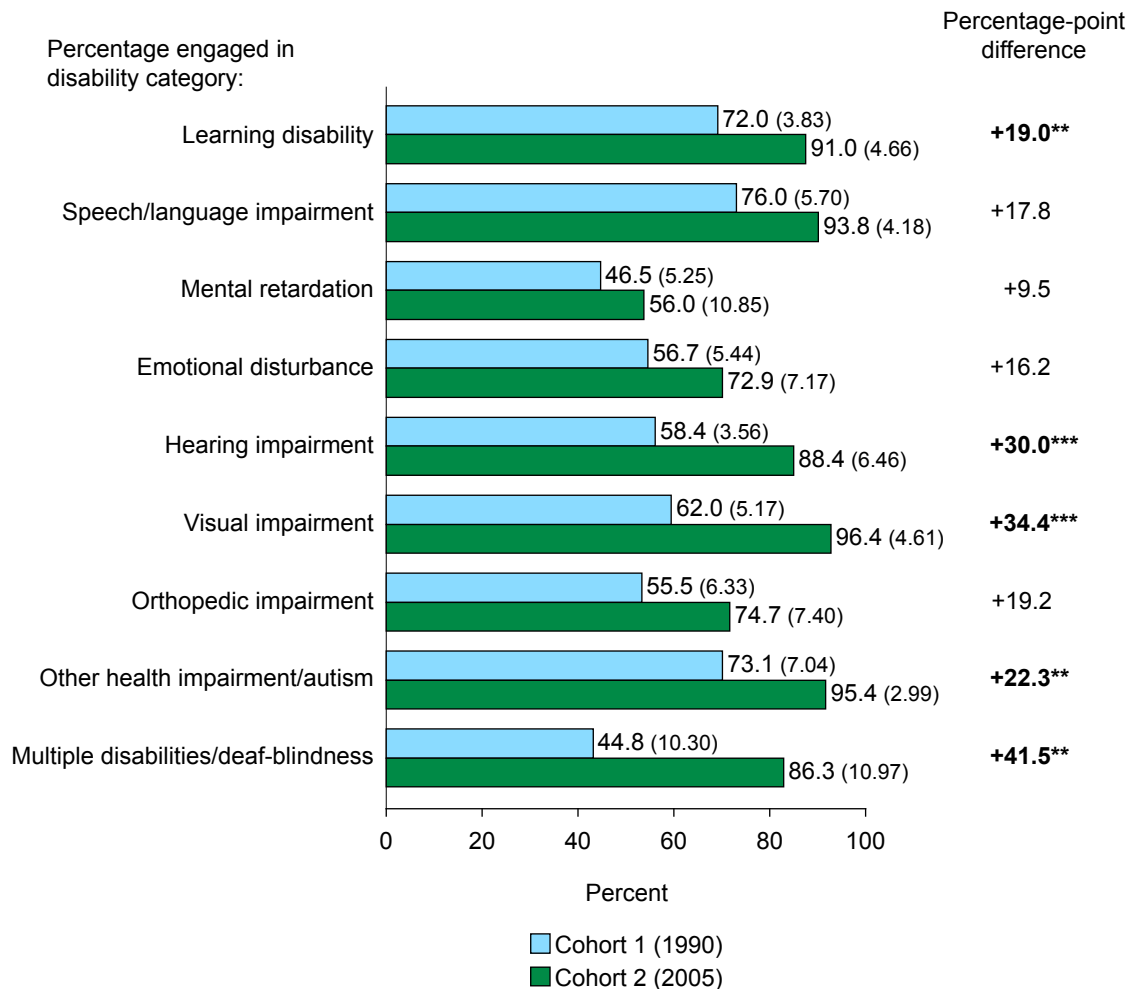
Related to the combination of ways youth with disabilities had been engaged (i.e., modes of engagement), engagement rates for those solely involved in employment or postsecondary education did not significantly differ between 1990 and 2005. In contrast, youth with disabilities were 15 percentage-points more likely to be engaged in both activities—school and work—concurrently at the time of the interview in 2005 as compared with 1990 (21 percent vs. 6 percent;  $p < .001$ ).

<sup>52</sup> NLTS respondents were asked, “[Are you/is *name of youth*] taking any classes from a [postsecondary school] now?” NLTS2 respondents were asked, “[Are you/is *name of youth*] going to a [postsecondary school] now?” NLTS respondents were asked, “[Do you/does *name of youth*] have a paid job now?” NLTS2 respondents were asked, “[Do you/does *name of youth*] have a paid job now, other than work around the house?”

### Comparisons Across Time of Engagement in Postsecondary Education or Employment by Disability Category

Rates of engagement in 1990 ranged from 45 percent for youth with multiple disabilities or deaf/blindness to 76 percent for those with speech or language impairments, and in 2005 ranged from 56 percent for youth with mental retardation to 96 percent for those with visual impairments (figure 13). Youth in five of the nine disability categories experienced significantly higher engagement rates in 2005 than in 1990, specifically those with learning disabilities (91 percent vs. 72 percent,  $p < .01$ ), hearing (88 percent vs. 58 percent,  $p < .001$ ), visual (96 percent vs. 62 percent,  $p < .001$ ), or other health impairments (95 percent vs. 73 percent,  $p < .01$ ), and multiple disabilities (86 percent vs. 45 percent,  $p < .01$ ).

Figure 13. Difference between 1990 and 2005 in engagement in postsecondary education and/or employment at the time of the interview for youth with disabilities out of high school 1 to 4 years, by disability category



\*\*  $p < .01$ , \*\*\*  $p < .001$ .

NOTE: Standard errors are in parentheses. Findings are reported for youth with disabilities who had been out of high school 1 to 4 years. NLTS percentages are weighted population estimates based on a sample of approximately 1,740 youth with disabilities across variables. NLTS2 percentages are weighted population estimates based on a sample of approximately 1,050 youth with disabilities across variables.

SOURCE: U.S. Department of Education, Office of Special Education Programs, National Longitudinal Transition Study (NLTS), Wave 2 parent/youth interview, 1990; U.S. Department of Education, Institute of Education Sciences, National Center for Special Education Research, National Longitudinal Transition Study-2 (NLTS2), Wave 3 parent interview and youth interview/survey, 2005.

Rates of involvement at the time of the interview in the various modes of engagement did not significantly differ across disability categories between 1990 and 2005, with one exception; youth with hearing impairments were significantly more likely to be employed as well as enrolled in postsecondary education at the time of the 2005 interview as compared with the 1990 interview (48 percent vs. 8 percent), a 39 percentage-point difference ( $p < .001$ ; table 21).

Table 21. Difference between 1990 and 2005 in modes of engagement in postsecondary education and/or employment at the time of the interview for youth with disabilities out of high school 1 to 4 years, by disability category

	Learning disability	Speech/ language impairment	Mental retardation	Emotional disturbance	Hearing impairment	Visual impairment	Orthopedic impairment	Other health impairment/ autism	Multiple disabilities/deaf-blindness
Percentage of youth who were:									
Employed only									
Cohort 1 (1990)	60.5 (4.17)	43.1 (6.61)	45.0 (5.24)	51.3 (5.49)	29.8 (3.31)	19.5 (4.22)	24.9 (5.51)	35.6 (7.60)	33.7 (9.79)
Cohort 2 (2005)	56.4 (8.07)	36.2 (8.34)	45.5 (10.88)	48.4 (8.06)	23.6 (8.56)	10.0 (7.42)	29.0 (7.73)	55.3 (7.10)	48.3 (15.95)
Percentage-point difference	-4.1	-6.9	+0.5	-2.9	-6.2	-9.5	+4.1	+19.7	+14.6
In postsecondary education only									
Cohort 1 (1990)	4.7 (1.80)	13.6 (4.57)	0.8 (0.94)	1.0 (1.09)	20.3 (2.91)	27.3 (4.74)	23.2 (5.38)	16.7 (5.92)	8.8 (5.87)
Cohort 2 (2005)	10.8 (5.05)	19.2 (6.83)	9.4 (6.38)	12.8 (5.39)	17.1 (7.59)	45.1 (12.31)	32.0 (7.94)	15.3 (5.14)	28.2 (14.36)
Percentage-point difference	+6.1	+5.6	+8.6	+11.8	-3.2	+17.8	+8.8	-1.4	+19.4
Employed and in postsecondary education									
Cohort 1 (1990)	6.7 (2.13)	19.2 (5.26)	0.7 (0.88)	4.4 (2.25)	8.3 (2.00)	15.3 (3.83)	7.4 (3.33)	20.8 (6.44)	2.3 (3.10)
Cohort 2 (2005)	23.7 (6.92)	38.3 (8.43)	1.1 (2.28)	11.8 (5.20)	47.7 (10.07)	41.3 (12.18)	13.7 (5.85)	24.8 (6.16)	9.8 (9.49)
Percentage-point difference	+17.0	+19.1	+0.4	+7.4	<b>+39.4***</b>	+26.0	+6.3	+4.0	+7.5
Not engaged									
Cohort 1 (1990)	28.0 (3.83)	24.0 (5.70)	53.5 (5.25)	43.3 (5.44)	41.6 (3.56)	38.0 (5.17)	44.5 (6.33)	26.9 (7.04)	55.2 (10.30)
Cohort 2 (2005)	9.0 (4.66)	6.2 (4.18)	44.0 (10.85)	27.1 (7.17)	11.6 (6.46)	3.6 (4.61)	25.3 (7.40)	4.6 (2.99)	13.7 (10.97)
Percentage-point difference	<b>-19.0**</b>	-17.8	-9.5	-16.2	<b>-30.0***</b>	<b>-34.4***</b>	-19.2	<b>-22.3**</b>	<b>-41.5**</b>

\*\*  $p < .01$ , \*\*\*  $p < .001$ .

NOTE: Standard errors are in parentheses. Findings are reported for youth with disabilities who had been out of high school 1 to 4 years. NLTS percentages are weighted population estimates based on a sample of approximately 1,740 youth with disabilities across variables. NLTS2 percentages are weighted population estimates based on a sample of approximately 1,050 youth with disabilities across variables.

SOURCE: U.S. Department of Education, Office of Special Education Programs, National Longitudinal Transition Study (NLTS), Wave 2 parent/youth interview, 1990; U.S. Department of Education, Institute of Education Sciences, National Center for Special Education Research, National Longitudinal Transition Study-2 (NLTS2), Wave 3 parent interview and youth interview/survey, 2005.

***Comparisons Across Time of Engagement in Postsecondary Education or Employment by High School-Leaving Characteristics***

High school completers who had been out of high school from 1 to 4 years evidenced significantly higher rates of engagement in 2005 than in 1990 (table 22). Eighty-eight percent were engaged in postsecondary education and/or work at the time of the interview in 2005 compared with 75 percent in 1990; a 14 percentage-point difference,  $p < .01$ . In contrast, youth with disabilities who left high school without completing their program (e.g., dropouts) did not experience a significant difference in their engagement rates between the two time periods.

Youth with disabilities who had been out of high school longer, between 2 to 4 years, were more likely to have been reported to be engaged in postsecondary education and/or employment at the time of the interview in 2005 than in 1990; 90 percent vs. 64 percent, a 26 percentage-point difference ( $p < .01$ ). Rates of engagement did not differ significantly between cohorts for youth with disabilities who had been out of high school between 1 to 2 years.

Mode of engagement did not differ significantly by secondary-school-leaving status or years since leaving high school between 1990 and 2005, with the exception that high school completers were more likely to be both employed and in postsecondary school at the time of the 2005 interview than at the 1990 interview. Twenty-four percent were engaged in both activities at the time of the 2005 interview, compared with 9 percent in 1990, a 16 percentage-point difference ( $p < .01$ ).

Table 22. Difference between 1990 and 2005 in engagement in postsecondary education and/or employment at the time of the interview for youth with disabilities out of high school 1 to 4 years, by secondary-school-leaving status and years since leaving high school

	Leaving status		Years since leaving high school		
	Completers	Non-completers	Less than 1 year	1 up to 2 years	2 up to 4 years
Percentage of youth who were engaged					
Cohort 1 (1990)	74.6 (3.09)	48.5 (4.85)	‡	65.9 (3.92)	64.4 (3.79)
Cohort 2 (2005)	88.2 (3.79)	70.2 (11.89)	‡	80.6 (5.45)	90.3 (4.74)
Percentage-point difference	<b>+13.6**</b>	+21.7		+14.7	<b>+25.9***</b>
Modes of engagement					
Percentage who were:					
Employed only					
Cohort 1 (1990)	59.5 (3.48)	45.5 (4.83)	‡	54.8 (4.12)	53.9 (3.95)
Cohort 2 (2005)	49.8 (5.87)	70.1 (11.90)	‡	49.7 (6.89)	54.4 (7.97)
Percentage-point difference	-9.7	24.6		-5.1	+0.5
In postsecondary education only					
Cohort 1 (1990)	6.6 (1.76)	1.4 (1.14)	‡	5.6 (1.90)	3.9 (1.53)
Cohort 2 (2005)	14.2 (4.10)	#	‡	13.6 (4.72)	11.5 (5.11)
Percentage-point difference	+7.6	-1.4		+8.0	+7.6
Employed and in postsecondary education					
Cohort 1 (1990)	8.5 (1.98)	1.7 (1.25)	‡	5.4 (1.87)	6.6 (1.97)
Cohort 2 (2005)	24.2 (5.03)	0.1 (0.82)	‡	17.3 (5.21)	24.4 (6.87)
Percentage-point difference	<b>+15.7**</b>	-1.6		+11.9	+17.8
Not engaged					
Cohort 1 (1990)	25.4 (3.09)	51.5 (4.85)	‡	34.1 (3.92)	35.6 (3.79)
Cohort 2 (2005)	11.8 (3.79)	29.8 (11.89)	‡	19.4 (5.45)	9.7 (4.74)
Percentage-point difference	<b>-13.6**</b>	-21.7		-14.7	<b>-25.9***</b>

# Rounds to zero.

‡ Responses for items with fewer than 30 respondents are not reported. In this case only youth with disabilities out of school 1 to 4 years were included.

\*\*  $p < .01$ , \*\*\*  $p < .001$ .

NOTE: Standard errors are in parentheses. Findings are reported for youth with disabilities who had been out of high school 1 to 4 years. NLTS percentages are weighted population estimates based on a sample of approximately 1,740 youth with disabilities across variables. NLTS2 percentages are weighted population estimates based on a sample of approximately 1,050 youth with disabilities across variables.

SOURCE: U.S. Department of Education, Office of Special Education Programs, National Longitudinal Transition Study (NLTS), Wave 2 parent/youth interview, 1990; U.S. Department of Education, Institute of Education Sciences, National Center for Special Education Research, National Longitudinal Transition Study-2 (NLTS2), Wave 3 parent interview and youth interview/survey, 2005.

### ***Comparisons Across Time of Engagement in Postsecondary Education or Employment by Demographic Characteristics***

Rates of engagement in postsecondary education and/or employment at the time of the interview did not differ significantly between 1990 and 2005 for youth with disabilities in both the highest and lowest parent household income categories (table 23). In contrast, those from families in the middle income category were more likely to be engaged in 2005 than in 1990. More than 90 percent of youth with disabilities from the middle household income category were reported to be engaged in school or work at the time of the 2005 interview, compared with 69 percent in 1990, a 22 percentage-point difference ( $p < .01$ ). This higher engagement rate experienced by youth with disabilities in the middle income category in 2005 lessened the gap in engagement rates between those from households in the middle and highest income categories. In 1990, youth with disabilities from households in the middle income category were less likely to be engaged in school and/or work than were those in the highest income category (69 percent vs. 86 percent,  $p < .01$ ); in contrast, in 2005, engagement rates for both income categories were higher than 90 percent.

When examining differences in engagement by racial/ethnic variables, rates of engagement in postsecondary education and/or employment ranged in 1990 from 43 percent for African American youth with disabilities to 73 percent for White youth with disabilities, and in 2005, from 64 percent for African American youth with disabilities to 91 percent for Hispanic youth with disabilities. White youth with disabilities experienced a 17 percentage-point difference between cohorts 1 and 2 (73 percent vs. 90 percent,  $p < .001$ ), and African-American and Hispanic youth with disabilities, 21 and 35 percentage-point differences, respectively (43 percent vs. 64 percent, and 56 percent vs. 91 percent respectively, not significant differences, possibly due in part to the large standard errors for these two groups).

Both males and females experienced higher rates of engagement in 2005 than in 1990; males evidenced an 18 percentage-point difference (89 percent vs. 72 percent,  $p < .001$ ) and females a 27 percentage-point difference (79 percent vs. 52 percent,  $p < .01$ ). In 1990, males were more likely than females to be engaged in school and/or work (72 percent vs. 52 percent,  $p < .01$ ). In 2005, the gap in engagement rates between males and females had lessened, with 89 percent of males and 79 percent of females reported to be engaged in education or employment at the time of the interview (not a significant difference).

Mode of engagement did not differ significantly between 1990 and 2005 by household income, race/ethnicity, or gender, with two exceptions. White youth and males were more likely to be both working and attending school at the time of the interview in 2005 (23 percent and 22 percent, respectively) than in 1990 (6 percent for both demographic groups;  $p < .01$  for both comparisons across time).

Table 23. Difference between 1990 and 2005 in engagement in postsecondary education and/or employment at the time of the interview for youth with disabilities out of high school 1 to 4 years, by household income, race/ethnicity, and gender

	Household income			Race/ethnicity			Gender	
	Low	Medium	High	White	African American	Hispanic	Male	Female
Percentage of youth who were engaged								
Cohort 1 (1990)	57.2 (4.59)	68.6 (4.88)	86.1 (4.40)	73.3 (3.09)	43.2 (6.93)	56.2 (10.87)	71.7 (3.13)	51.7 (5.10)
Cohort 2 (2005)	77.7 (7.16)	90.3 (6.04)	98.9 (2.32)	90.4 (3.88)	64.0 (11.83)	91.4 (8.77)	88.9 (4.22)	78.7 (7.09)
Percentage-point difference	+20.5	<b>+21.7**</b>	+12.8	<b>+17.1***</b>	+20.8	+35.2	<b>+17.8***</b>	<b>+27.0**</b>
Modes of engagement								
Percentage of youth who were:								
Employed only								
Cohort 1 (1990)	50.9 (4.64)	57.9 (5.19)	60.1 (6.22)	61.3 (3.40)	35.8 (6.70)	51.2 (10.95)	60.5 (3.38)	40.6 (5.01)
Cohort 2 (2005)	62.1 (8.35)	60.8 (9.97)	30.8 (10.25)	54.1 (6.56)	36.3 (11.85)	63.6 (15.06)	55.4 (6.68)	44.6 (8.60)
Percentage-point difference	+11.2	+2.9	-29.3	-7.2	+0.5	+12.4	-5.1	+4.0
In postsecondary education only								
Cohort 1 (1990)	3.7 (1.75)	5.0 (2.29)	10.3 (3.86)	5.9 (1.65)	2.0 (1.96)	3.1 (3.80)	4.5 (1.43)	5.1 (2.25)
Cohort 2 (2005)	6.8 (4.33)	10.1 (6.15)	33.6 (10.49)	12.9 (4.42)	9.9 (7.36)	13.7 (10.76)	11.1 (4.22)	15.7 (6.30)
Percentage-point difference	+3.1	+5.1	+23.3	+7.0	+7.9	+10.6	+6.6	+10.6
Employed and in postsecondary education								
Cohort 1 (1990)	2.6 (1.48)	5.8 (2.46)	15.7 (4.62)	6.1 (1.67)	5.5 (3.19)	1.9 (2.99)	6.1 (1.65)	6.0 (2.42)
Cohort 2 (2005)	8.8 (4.87)	19.4 (8.07)	34.4 (10.55)	23.4 (5.58)	17.8 (9.42)	14.1 (10.89)	22.4 (5.60)	18.4 (6.71)
Percentage-point difference	+6.2	+13.6	+18.7	<b>+17.3**</b>	+12.3	+12.2	<b>+16.3**</b>	+12.4
Not engaged								
Cohort 1 (1990)	42.8 (4.59)	31.4 (4.88)	13.9 (4.40)	26.7 (3.09)	56.8 (6.93)	43.8 (10.87)	28.9 (3.13)	48.3 (5.10)
Cohort 2 (2005)	22.3 (7.16)	9.7 (6.04)	1.1 (2.32)	9.6 (3.88)	36.0 (11.83)	8.6 (8.77)	11.1 (4.22)	21.3 (7.09)
Percentage-point difference	-20.5	<b>-21.7**</b>	-12.8	<b>-17.1***</b>	-20.8	-35.2	<b>-17.8***</b>	<b>-27.0**</b>

\*\* $p < .01$ , \*\*\* $p < .001$ .

NOTE: Standard errors are in parentheses. Findings are reported for youth with disabilities who had been out of high school 1 to 4 years. NLTS percentages are weighted population estimates based on a sample of approximately 1,740 youth with disabilities across variables. NLTS2 percentages are weighted population estimates based on a sample of approximately 1,050 youth with disabilities across variables.

SOURCE: U.S. Department of Education, Office of Special Education Programs, National Longitudinal Transition Study (NLTS), Wave 2 parent/youth interview, 1990; U.S. Department of Education, Institute of Education Sciences, National Center for Special Education Research, National Longitudinal Transition Study-2 (NLTS2), Wave 3 parent interview and youth interview/survey, 2005.



## Summary

This chapter has described differences between 1990 and 2005 in engagement in employment and/or postsecondary education at the time of the interview of youth with disabilities who had been out of secondary school from 1 to 4 years.

Youth with disabilities were more likely to have been reported to be employed and/or attending postsecondary school at the time of the 2005 interview, as compared with the 1990 interview (86 percent vs. 65 percent). Engagement rates for those involved solely in employment or postsecondary education did not significantly differ between 1990 and 2005. In contrast, youth with disabilities were 15 percentage-points more likely to be engaged in both activities—school and work—concurrently at the time of the interview in 2005 as compared with 1990 (21 percent vs. 6 percent).

Youth in five of the nine disability categories experienced significantly higher engagement rates in 2005 than in 1990, specifically those with learning disabilities (19 percentage-point difference); hearing (30 percentage-point difference), visual (34 percentage-point difference), or other health impairments (22 percentage-point difference); and multiple disabilities (42 percentage-point difference).

High school completers evidenced significantly higher rates of engagement in 2005 than in 1990 (88 percent vs. 75 percent, a 14 percentage-point difference). Engagement rates did not differ significantly between the two cohorts for youth with disabilities who had not completed high school. Youth with disabilities who had been out of high school between 2 and 4 years were more likely to have been reported to be engaged in postsecondary education and/or employment at the time of the interview in 2005 than in 1990; 90 percent vs. 64 percent, a 26 percentage-point difference.

Youth from families in the middle income category evidenced a significant difference in their rate of engagement in school and/or work between 1990 and 2005 (69 percent vs. 90 percent, a 22 percentage-point difference), lessening the gap between their rate of engagement and that of youth with disabilities from higher income households. In 1990, 69 percent of those in the middle category and 86 percent of those in the highest income category had been involved in school and/or work at the time of the interview, whereas in 2005, engagement rates for both income categories were higher than 90 percent.

Both males and females experienced higher rates of engagement in 2005 than in 1990; males evidenced an 18 percentage-point difference and females a 27 percentage-point difference. In 1990, males were more likely than females to be engaged in school and/or work (72 percent vs. 52 percent,  $p < .01$ ). In 2005, the gap in engagement rates between males and females had lessened, with 89 percent of males and 79 percent of females reported to be engaged in education or employment at the time of the interview.

The beginning chapters of this report have focused on differences in the postsecondary education and employment experiences of youth with disabilities. The following chapters shift the focus from these two post-high school outcomes to household circumstances and social and community involvement.

