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RESEARCHBRIEF

An update on HDI's research in the field of developmental disabilities

Factors in Successful Post-School Transitions

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Young adults with disabilities face multiple challenges in obtaining successful post-school outcomes. In a National Longitudinal Transition Study-2 report, Wagner, Newman, Cameto, Garza, and Levine (2005) found that for former students with disabilities, 70% had engaged in paid employment since leaving high school, though only 40% were employed at the time of interview –clearly unfavorable to the 63% employment rate of their peers without disabilities, and similar data have been reported for former students with disabilities in Kentucky.

In this brief article, we first briefly discuss what the literature says about predictors of successful post-school transition for young adults with disabilities. Secondly, we analyze our latest KY post-school data to determine the factors most associated with successful post-school outcomes for former students in our state. Finally, we provide evidence-based "Transition Tips" for youth with disabilities, their families, teachers, and school administrators.

Some of the key factors in successful transition are very well documented in the literature:

Student Self-Determination. Students' ability to direct their own lives and to make important decisions related to their education and career goals (Holub, Lamb, & Bang, 1998) have been related to positive post-school outcomes for students with intellectual disabilities (Weymeyer & Palmer, 2003), though opportunities to teach self-determination skills are often missed (Carter, Owens, Trainor, Sun, & Sweeden, 2009).

Student Involvement in the IEP Process. Student involvement in the IEP process is both an indicator of student self-determination and an opportunity to enhance self-determination in a critical moment in planning one's future (Test et al., 2004; Thoma & Wehman, 2010).

Community-Based Vocational Training, Paid Employment While in School, and Interagency Planning. The importance of paid employment opportunities during high school has been well documented in achieving positive post-school outcomes for youth with disabilities (Winsor, Butterworth, & Boone, 2011). Inge and Moon (2011) have noted the importance of student-centered planning, family involvement, and high school curricula that include access to both life skill instruction and the general curriculum. Carter, Ditchman, Sun, Trainor, Sweeden, and Owens (2010) have indicated the need for such summer opportunities as student internships and volunteer activities for students with significant disabilities, who typically have had little opportunity to engage in these.

Data Collection

The **Kentucky Post School Outcomes Center** (KyPSO) (www.kypso.org), housed at the Human Development Institute and funded by the Kentucky Department of Education, collects data on post-school outcomes for all KY students who had IEPs in place and exited public schools through graduation with a diploma, attainment of a certificate, reaching maximum age or dropping out. These former students are contacted one year after exit through the Youth One Year Out (YOYO) former student interview. The YOYO is a computer assisted telephone interview developed by KyPSO and administered by trained district staff. The YOYO asks questions regarding employment, higher education, community participation, and other factors.

We are able to combine YOYO results with other data sources to examine factors associated with successful post-school outcomes. The *Kentucky In School Transition Survey (KiSTS)* collected information on the same group of students one year prior to the YOYO, when they were exiting school. The KiSTS included a record review, completed by school staff, on students' transition goals as listed in their IEP, representatives attending students' ARC meetings, and time spent in general education classes. The KiSTS also included a student survey, which directly asked students about post-school plans as well as involvement in extra-curricular activities and IEP meetings.

Our intent is to examine the relationship between all relevant factors for which we have data and the outcomes of higher education and competitive employment. As determined by the US Office of Special Education Programs, higher education is defined as the completion of at least one full term at a two or four year college or university. Competitive employment is defined as having worked 1) for at least 90 days, 2) at or above minimum wage, 3) for an average of at least

20 hours per week, and 4) not in a sheltered workshop. Additionally, when we report on whether or not an individual is competitively employed, we exclude from our analysis anyone who is also enrolled in higher education, so that we can isolate those factors most pertinent to individuals who have chosen to pursue an employment outcome rather than higher education.

Results

Table 1 presents each of the variables in our analysis and the best estimate we have of their frequency among all 2010-11 exiters with IEPs.

We then assessed the relative impact of each of these factors on the outcomes of higher education and competitive employment. We did this through two logistic regression equations where we estimated the odds that an individual would achieve each outcome based on the presence of each factor. Because our working sample was under-representative of dropouts, African-Amercian students and students with Emotional Behavioral Disabilities, we adjusted our data to assign more weight to responses from students from these categories.

Results of these analyses are presented in Table 2. We excluded cases with missing values for any of the predictor variables, which explains our final sample sizes of 2041 and 1833. Odds Ratios are reported for predictors that were statistically significant ($p<.05$). In cells that do not contain numbers, the item was either deemed irrelevant to that particular outcome (denoted '*') or not statistically significant (denoted '-'). Odds ratios greater than a value of '1' indicate that the predictor is positive, while those below '1' indicate a negative relationship (**). The r2 figures of '.43' and '.33' are measures of how much is explained by our models. We can roughly interpret these to mean that 43% (or 33%) of the uncertainty in these outcomes is explained by our models. This is a fairly good 'fit' for these types of models, but still indicates how much we do not yet know.

Table 1. Descriptive Variables

Variable	Percent and Total (N) for Each Item
Higher Education	19.7% (2745)[1]
Competitive Employment (only)	41.2% (2491)
Gender (Male)	69.6% (4505)
Race (Black)	14.7% (4573)
Disability Category (Intellectual)	28.3% (4504)
Disability Category (Emotional Behavioral)	8.8% (4504)
Disability Category (Autism)	3.2% (4504)
Manner of Exit (Graduation)	76.7% (4532)
Stated Desire to go to College	43.0% (3399)[2]
Stated Desire to obtain full time Employment	41.8% (3399)
Documented IEP Goal of College	33.5% (3399)
Documented IEP Goal of Full Time Employment	29.5% (3399)
Participation in Extra-Curricular Activities	50.1% (3369)
Employed while in High School	28.5% (3395)
High involvement level at IEP Meeting	53.1% (3384)
Greater than 80% time in Regular Education	63.9% (3547)
OVR represented at ARC meeting	41.0% (3230)
College Representative at ARC meeting	6.7% (2560)
% of students in districts > 80% in LRE	70.6% (4574)
County Unemployment Rate	10.7% (4557)
County Rurality[3]	4.0 (4557)

Discussion

Several findings are noteworthy from the analyses in Table 2. It is not surprising that students' plans for their future were positively associated with their outcomes (a student planning to go to college was 4.89 times as likely to do so then a student without such plans; a student planning to go to work full time was 1.8 times as likely to obtain competitive employment then a student without such plans). Nor is it surprising that documenting these goals in a student's IEP had a positive relationship to each outcome. But what is surprising is that the student's own response on a survey (plans) was a better predictor in both cases than the goals listed in their IEP. This is a trend we have seen for several years.

The strongest predictor of obtaining competitive employment was employment while in high school. Students working while in high school were 3.18 times as likely as students who did not work while in high school to secure competitive employment in the year after exit. Interestingly, though students with autism were almost twice as likely to go on to higher education than other students with disabilities, they were less than one-half as likely to obtain competitive employment. For our whole sample, having an OVR counselor present at the final ARC meeting increased the likelihood of a student pursuing higher education, but was not a significant predictor of competitive employment. Having a representative from a Supported Employment agency present at the final ARC meeting did increase the likelihood of obtaining competitive employment.

Males clearly fared better in terms of competitive employment, but there was not a significant difference based on gender for higher education. African American students did not fare significantly differently in terms of either outcome when other factors were held constant. Students with intellectual disabilities did more poorly in both outcome categories than did former students with other disabilities. Students with emotional behavioral disabilities did more poorly in enrolling in higher education. It is not surprising that graduating with a diploma is a major boost for students wishing to go on to higher education (4.27 times as likely as those exiting by other means) as well as competitive employment (4.07 times more likely). Involvement in extra-curricular activities and participation in one's IEP meeting (a measure of self-determination) were positive predictors of higher education. Spending 80% or

more of one's time in regular education classes more than doubled the likelihood of going on to higher education, but had no relationship to competitive employment.

County level unemployment rate had no significant effect on employment, and actually had a positive effect on enrolling in higher education. Our measure of the value that a community places on higher education (the percentage of county residents with a college degree) had a positive effect on enrollment in higher education. The degree of rurality was not a significant predictor for either outcome.

Research to Practice: Strategies That Make A Difference

Teachers, Administrators, and Policy Makers

Students with intellectual disabilities and autism experience greater barriers to employment than other students with disabilities. Students with intellectual disabilities experience significant barriers to both employment and post-secondary education. We need to insure that students are linked before they exit school to Vocational Rehabilitation Services, and when appropriate, to our state's Developmental Disability Services, including the Michelle P. and Supports for Community Living Waivers to increase post-school options.

While the percentage of students with intellectual disabilities going onto post-secondary education remains low, there are increasing opportunities for post-secondary education for students with intellectual disabilities in our state (www.shepky.org).

Living in rural areas (where there may be limited transportation alternatives) and/or areas with high unemployment may present additional barriers to post-school employment. Yet our analyses show that former students in rural and high unemployment areas are able to achieve positive post-school outcomes at the same rates as other students.

Table 2. Logistic Regression Models Predicting Higher Education and Competitive Employment

	Higher Education	Competitive Employment (only)
	OR	OR
Plans College	4.89	*
IEP Has College Goal	3.32	*
Plans Full Time (FT) Work	*	1.80
IEP Has FT Work Goal	*	1.58
OVR Was At ARC	1.28	-
College Rep Was at ARC	-	*
Supported Employment Rep at ARC	*	1.71
HS Employment (Paid)	*	3.18
Student Has Autism	1.96	0.44
Emotional Behavorial Disability	0.49	-
Intellectual Disability	0.33	0.77
Male	-	1.91
African-American	-	-
Extra-Curricular Activity	1.43	-
Participate in IEP	1.61	
Time in Regular Education	2.23	
Exit=Graduated	4.27	4.07
LRE % >80% District	-	-
County Rurality	-	-
County Unemployment Rate	1.10	-
County % College Degree	1.03	-
r-squared	0.43	0.33
n	2041	1833

Students need explicitly planned opportunities throughout their school programs to develop the critical component skills of self-determination. This extends not just to active participation in one's IEP, but in monitoring one's academic and transition goals throughout the year. Indeed, we found that students' own goals were highly related to both employment and post-secondary education. See: http://www.aucd.org/NGSD/ for an outstanding set of national self-determination resources.

Student paid work opportunities are critical for post-school employment. While these opportunities have been more challenging for students with moderate and severe disabilities, Carter and his colleagues (2010; 2011) have shown how summer work opportunities provide one venue to obtaining this experience.

As might be expected, opportunities to participate in general education classes were associated with attending post-secondary education. We still need to learn what types of general education classes are the most important.

Students and Families

Students need the opportunity to participate and even lead their own IEPs. They also need to play a lead role in decisions that affect both their current life and their future (See: www.kyap.org for a planning process you can use!)

Even more so than stated goals on their IEPs, students' own goals of wanting to work and to go to school were predictive of their post-school outcomes. Helping students develop goals for both employment and post-secondary education are critical roles for both families and schools.

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Extra-curricular activities are important, not just as part of school, but in preparation for adult life, especially post-secondary education. Moreover, extra-curricular activities can also provide important opportunities for students to engage in service learning (doing things with others to help one's community) as a means of integrating work and academic skills, and building a resume for a future career.

Do not be afraid to set high goals for yourself, including college. Increasingly, students with disabilities, including students with intellectual disabilities, are going to college (see www.thinkcollege.net)

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Footnotes

1 Population figure is not for true population, but for full YOYO (including unmerged cases)

2 Population figures for items from the KISTS are obtained for the full KISTS, and not the true population.

3 Reported figure is mean score on USDA Beale codes where 1= most urban and 9= most rural.