Evidence-Based Secondary Transition Predictors of Improved Post-school Outcomes for Students with Disabilities

One of the National Secondary Transition Technical Assistance Center’s (NSTTAC) tasks is to identify the evidence-based practices for the field of secondary transition. To do this, NSTTAC’s review of literature has been conducted in two parts. In Part I, evidence-based practices based on quality experimental (both group and single subject designs) studies were identified. However, while the evidence-based practices were designed to teach students specific transition-related skills, to date, the experimental literature has not attempted to measure the impact of these skills on post-school outcomes. As a result, in Part II, the review was expanded to include rigorous correlational research in secondary transition to identify evidence-based predictors that are correlated with improved post-school outcomes in education, employment, and/or independent living.

In order to systematically evaluate each correlational study, quality indicators for correlational research developed by Thompson, Diamond, McWilliam, Snyder, and Snyder (2005) were adapted for this review. Decision rules for determining levels of evidence for correlational research based on Thompson et al. and the Institute for Education Sciences (IES) were also established. While correlational research examines relationships among variables, it is unable to reveal causality (although in many cases the direction of the relationship is hypothesized). Therefore, according to IES, the evidence provided by correlational research may only be established as moderate levels of causal inference. NSTTAC then added the potential level of evidence.

<table>
<thead>
<tr>
<th>Levels of Evidence of Causal Inference</th>
<th>Correlational</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong</td>
<td>N/A</td>
</tr>
</tbody>
</table>
| Moderate                              | • 2 a priori (planned, hypothesis stated) studies with consistent significant correlations between predictor and outcome
  • Can include exploratory studies only when paired with a priori significant correlations
  • Must include effect size calculations or the data to calculate effect size |
| Potential (needs additional research) | • 1 a priori (planned, hypothesis stated) study
  • Two or more exploratory (no specific hypothesis) studies with significant correlations between predictor and outcome |

Below you will find more information on identified predictors categories of post-school success, please visit http://www.nsttac.org/ebp/PredictorResources.aspx for detailed information. Predictor categories were created based on consensus by researchers, and researchers classified each predictor to reflect a comprehensive term to support each description. The descriptions of each predictor were taken directly from the findings in the studies reviewed. Currently, there are 16 predictor categories, which are presented in alphabetical order. Following the predictor categories and descriptions, a table is provided of the predictor categories organized by the three post-school outcome areas of education training, employment, and independent living.

1. Career Awareness

Description:
• Students in the School to Work Transition Program who exited school with high job search skills were more likely to be engaged in post-school employment (Benz et al., 1997)
• Students in the School to Work Transition Program who exited school with high career awareness skills were more likely to be engaged in post-school employment or education (Benz et al., 1997)

Predicts improved outcomes in: Education and Employment

Level of evidence: Potential for post-school education and employment with all disability categories
2. **Community Experiences**

**Description:**
- Students who participated in community-based training which involved instruction in non-school, natural environments focused on development of social skills, domestic skills, accessing public transportation, and on-the-job training were more likely to be engaged in post-school employment (White & Weiner, 2004)

**Predicts improved outcomes in:** Employment

**Level of evidence:** *Potential* with students with severe disabilities

3. **Exit Exam Requirements/ High School Diploma Status**

**Description:**
- Students who had high scores on adaptive and academic skills, self-care skills, GPA on academic activities, received a diploma, and higher IQs as reported in school records were more likely to be engaged in post-school employment (Heal & Rusch, 1994)

**Predicts improved outcomes in:** Employment

**Level of evidence:** *Potential* with all disability categories

4. **Inclusion in General Education**

**Description:**
- Students who participated in regular academics were 5 times more likely to participate in post-school education (Baer et al., 2003)
- Students who took academic courses in regular education placements were more likely to be engaged in post-school education, employment, and independent living (Blackorby et al., 1993)
- Students with high performance in five areas, including reading, writing, math, behaving responsibly, and problem solving skills were more likely to be engaged in post-school education (Halpern et al., 1995)
- Students who passed more than half or all courses in 8 curriculum areas (remedial academics, traditional content classes, personal finance, community access, behaving responsibly, goal-setting or problem solving, specialized vocational education, regular vocational education) were more likely to be engaged in post-school education (Halpern et al., 1995)
- Students who had high scores on adaptive and academic skills, self-care skills, GPA on academic activities, received a diploma, and higher IQs as reported in school records were more likely to live independently (Heal et al., 1997)
- Students who spent more hours in regular education courses were more likely to be living independently (Heal & Rusch, 1995)
- Students who participated in more highly integrated and less highly specialized school programs were more likely to be living independently (i.e., high independence defined as: (a) parent’s prediction of youth’s future home independence, sum of cooking, shopping, washing, and cleaning skills, (b) sum of phone, time-keeping, counting, reading skills; (c) sum of dressing, feeding, and going out skills; (d) respondent’s claim of youth’s ability to respond on a follow-up questionnaire; (e) respondent’s or school’s claim of therapeutic counseling for youth; (f) number of developmental disabilities services attributed to the youth; (g) youth used...
some developmental disabilities prosthetic device in the past year; (d) youth worked for pay in the past year; (e) youth worked with or without pay in the past year; (f) educational status, dropout to college graduation; Heal et al., 1997)

- Students who were integrated into a regular school setting (as opposed to special schooling for persons with a disability) for most of their schooling were more likely to be engaged in post-school employment (Leonard et al., 1999)
- Students who had the highest degree of integration with age-appropriate peers were more likely to engage in post-school employment (White & Weiner, 2004)

**Predicts improved outcomes in:** Education, Employment, and Independent Living

**Level of evidence:** Moderate for all three outcome areas with all disability categories

5. **Interagency Collaboration**

**Description:**

- Students who received assistance from 3 to 6 community-based agencies (as compared to students with assistance from 0 to 2 agencies) were more likely to be engaged in post-school employment or education (Bullis et al., 1995)
- Transition interagency council characteristics (i.e., agency directories, agreements, councils, general information, local business advisory boards, parent network, statements) were more likely to be engaged in post-school education (Repetto et al., 2002)
- Transition service characteristics (i.e., Association of Retarded Citizens, Department of Children and Families, Developmental Services, Division of Blind Services, DVR Rehab, Easter Seal, Job Service of FL, Job Training, Mental Health, Social Security Initiatives, United Cerebral Palsy) were more likely to be engaged in post-school education (Repetto et al., 2002)
- Transition support characteristics (i.e., Agency Referral FU, Case Management, Community Services, Employment Spec., Equipment, Family Services, Financial, Guardianship, Guidance/Counseling, Living Arrangement, Medical, Parent Information, Referral, Social/Leisure, Support Service, Teacher Resources, Transition Spec., Transportation) were more likely to be engaged in post-school education (Repetto et al., 2002)

**Predicts improved outcomes in:** Education and Employment

**Level of evidence:** Potential for post-school education and employment with all disability categories

6. **Occupational Courses**

**Description:**

- Students who passed more than half or all courses in 8 curriculum areas (remedial academics, traditional content classes, personal finance, community access, behaving responsibly, goal-setting or problem solving, specialized vocational education, regular vocational education) were more likely to be engaged in post-school education (Halpern et al., 1995)
- Students who took more hours of academic and occupational courses and spent more time in regular education were more likely to be engaged in post-school employment (Heal & Rusch, 1995)

**Predicts improved outcomes in:** Education and Employment

**Level of evidence:** Potential for post-school education and employment with all disability categories

7. **Paid Work Experience**

**Description:**

- Students who participated in the Youth Transition Program with 2 or more paid jobs during high school were more likely to be engaged in post-school employment or education (Benz et al., 2000)
• Students in the School to Work Transition Program who had 2 or more jobs during the last two years of high school were more likely to be engaged in post-school employment (Benz et al., 1997)
• Students who had year-round paid job for one full year during high school were 5 times more likely to be engaged in post-school employment and education (Bullis et al., 1995)
• Students who had worked for pay during high school were more likely to be living independently (Bullis et al., 1995)
• Students with two or more jobs during their last two years of high school were more likely to be engaged in post-school employment (Doren & Benz, 1998)
• Students who had a job at the time of high school exit were 5.1 times more likely to be engaged in post-school employment (Rabren et al., 2002)

Predicts improved outcomes in: Education, Employment, and Independent Living

Level of evidence: Moderate for post-school education and employment with all disability categories; Potential for post-school independent living with all disability categories

8. Parental Involvement
Description:
• Students with one or more parents who participated (as measured by the percentage) in more IEP meetings during the 11th and 12th grade year were more likely to be engaged in post-school employment (i.e., Employment Status defined as employed, skilled laborer receiving more than minimum wage that requires specific skill training prior to beginning the job; Employment Stability defined as high scores on the Employment Training Index which measure months of full and part-time employment, months out of high school, months enrolled in post-secondary education; Fourqurean et al., 1991)

Predicts improved outcomes in: Employment
Level of evidence: Potential for students with LD

9. Program of Study
Description:
• Students who participated in school-based programs that included career major (“sequence of courses based on occupational goal”), cooperative education (“combines academic and vocational studies with a job in a related field”), school-sponsored enterprise (“involves the production of goods or services by students for sale to or use by others”) and technical preparation (“a planned program of study with a defined career focus that links secondary and post-secondary education”) were 1.2 times more likely to be engaged in post-school employment (i.e., employment defined as (a) stability with benefits, insurance, paid sick days and (b) full-time employment; Shandra & Hogan, 2008)

Predicts improved outcomes in: Employment
Level of evidence: Potential with students with moderate and severe disabilities

10. Self-Advocacy/ Self-Determination
Description:
• Students who passed more than half or all courses in 8 curriculum areas (remedial academics, traditional content classes, personal finance, community access, behaving responsibly, goal-setting or problem solving, specialized vocational education, regular vocational education) were more likely to be engaged in post-school education (Halpern et al., 1995)
• Students with higher self-determination skills were more likely be engaged in post-school employment (Wehmeyer & Schwartz, 1997)

**Predicts improved outcomes in:** Education and Employment  
**Level of evidence:** Potential for post-school education and employment with all disability categories

11. **Self-Care/ Independent Living Skills**  
**Description:**  
- Students who had high scores on adaptive and academic skills, self-care skills, GPA on academic activities, received a diploma, and higher IQs as reported in school records were more likely to live independently (Heal & Rusch, 1994)  
- Students who had high self-care skills were more likely to be engaged in post-school education, employment, and independent living (Blackorby et al., 1993)  
- Students with high daily living skills (based on teacher and student ratings from the Life Centered Career Education rating scales) were more likely to have a higher quality of life (independent living) and be engaged in post-school employment (Roessler et al., 1990)

**Predicts improved outcomes in:** Education, Employment, and Independent Living  
**Level of Evidence:** Moderate for post-school independent living with all disability categories; Potential for post-school education and employment with all disability categories

12. **Social Skills**  
**Description:**  
- Students in the School to Work Transition Program who exited high school with high social skills were more likely to be engaged in post-school employment (Benz et al., 1997)  
- Students who passed more than half or all courses in 8 curriculum areas (remedial academics, traditional content classes, personal finance, community access, behaving responsibly, goal-setting or problem solving, specialized vocational education, regular vocational education) were more likely to be engaged in post-school education (Halpern et al., 1995)  
- Students with high social skills (based on teacher ratings from the Life Centered Career Education rating scales) were more likely to have a higher quality of life (independent living) and be engaged in post-school employment (Roessler et al., 1990)

**Predicts improved outcomes in:** Education and Employment  
**Level of Evidence:** Potential for post-school education and employment with all disability categories

13. **Student Support**  
**Description:**  
- Students who had support from self-family-friend network to find a job were more likely to be engaged in post-school employment (Doren & Benz, 1998)  
- Students who indicated high levels of satisfaction with instruction received (reading, writing, math, behaving responsibly, and problem solving) during high school were more likely to be engaged in post-school education (Halpern et al., 1995)  
- Students who spent more time per week with friends or family (i.e., days per week that youth interacted socially with friends or family members) during school were more likely to experience higher quality of life (i.e., independence defined as (a) self-sufficiency, (b) community living skills, (c) youth has post-high school education, (d) youth has checking/savings account, and (e) adaptive behavior; social relationships defined as (a) how well youth gets along with others, (b) days per week youth sees friends or family, (c) whether youth attending social groups in past twelve months, (d) if parent says youth is not socially isolated, and (e) days per week youth usually sees family; Heal et al., 1999)
• Students with high occupational guidance and preparation (based on teacher student ratings from the Life Centered Career Education rating scales) were more likely to have a higher quality of life (independent living) and be engaged in post-school employment (Roessler et al., 1990)

Predicts improved outcomes in: Education, Employment, and Independent Living

Level of Evidence: Potential with all disability categories

14. Transition Program

Description:
• Students who participated in the Youth Transition Program with four or more transition goals met were more likely to be engaged in post-school employment or education (Benz et al., 2000)
• Students who received transition planning services during the year prior to leaving school were more likely to be engaged in post-school education (Halpern et al., 1995)
• Transition service characteristics (i.e., Assoc. of Retarded Citizens, Department of Children and Families, Developmental Services, Division of Blind Services, DVR Rehab, Easter Seal, Job Service of FL, Job Training, Mental Health, Social Security Initiatives, United Cerebral Palsy) were more likely to be engaged in post-school education (Repetto et al., 2002)
• Transition support characteristics (i.e., Agency Referral FU, Case Management, Community Services; Employment Spec., Equipment, Family Services, Financial, Guardianship, Guidance/Counseling, Living Arrangement, Medical, Parent Information, Referral, Social/Leisure, Support Service, Teacher Resources, Transition Spec., Transportation) were more likely to be engaged in post-school education (Repetto et al., 2002)
• Transition program characteristics (i.e., academic, adult ed, Career education, college, community training, course mod., developmental train., employment, entrepreneurship, follow-up services, goodwill, job coach, job corp, life skills, military, vocational training, voc eval/assess) were more likely to be engaged in post-school education (Repetto et al., 2002)

Predicts improved outcomes in: Education and Employment

Level of Evidence: Moderate for post-school education with all disability categories; Potential for post-school employment with all disability categories

15. Vocational Education

Description:
• Students who participated in vocational education were 2 times more likely to be engaged in full-time post-school employment (Baer et al., 2003)
• Students who passed more than half or all courses in 8 curriculum areas (remedial academics, traditional content classes, personal finance, community access, behaving responsibly, goal-setting or problem solving, specialized vocational education, regular vocational education) were more likely to be engaged in post-school education (Halpern et al., 1995)
• Students with vocational education credits in high school were more likely to be engaged in post-school employment and post-school education (Harvey, 2002)
• Students who received technology training were more than twice as likely to be employed (Leonard et al., 1999)
• Students who took more hours of academic and occupational courses and spent more time in regular education were more likely to be engaged in post-school employment (Heal & Rusch, 1995)

Predicts improved outcomes in: Education and Employment

Level of Evidence: Moderate with all disability categories
16. Work Study

**Description:**
- Students who participated in work study were 2 times more likely to be engaged in full-time post-school employment (Baer et al., 2003)
- Students in the Bridges School to Work Program who accepted a post-internship job offer and who completed the internship were more likely to engage in post-school employment (Fabian et al., 1998)
- Students who participated in the Bridges School to Work program in their last year of high school and completed the internship were four times more likely to be employed (Luecking & Fabian, 2000)
- Students who received a job offer after completion of the Bridges School to Work internship were five times more likely to be employed (Luecking & Fabian, 2000)

**Predicts improved outcomes in:** Employment

**Level of Evidence:** Moderate with all disability categories

Note: Complete references for all citations can be found on the NSTTAC website at: [http://www.nsttac.org/ebp/ReferenceListPredictorCategories.aspx](http://www.nsttac.org/ebp/ReferenceListPredictorCategories.aspx)

<table>
<thead>
<tr>
<th>Predictors/Outcomes</th>
<th>Education</th>
<th>Employment</th>
<th>Independent Living</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Awareness</td>
<td>P</td>
<td>P</td>
<td></td>
</tr>
<tr>
<td>Community Experiences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exit Exam Requirements/High School Diploma Status</td>
<td></td>
<td>P</td>
<td></td>
</tr>
<tr>
<td>Inclusion in General Education</td>
<td>M</td>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td>Interagency Collaboration</td>
<td>P</td>
<td>P</td>
<td></td>
</tr>
<tr>
<td>Occupational Courses</td>
<td>P</td>
<td>P</td>
<td></td>
</tr>
<tr>
<td>Paid Employment/Work Experience</td>
<td>M</td>
<td>M</td>
<td>P</td>
</tr>
<tr>
<td>Parental Involvement</td>
<td></td>
<td>P</td>
<td></td>
</tr>
<tr>
<td>Program of Study</td>
<td></td>
<td>P</td>
<td></td>
</tr>
<tr>
<td>Self-Advocacy/Self-Determination</td>
<td>P</td>
<td>P</td>
<td></td>
</tr>
<tr>
<td>Self-Care/Independent Living</td>
<td>P</td>
<td>P</td>
<td>M</td>
</tr>
<tr>
<td>Social Skills</td>
<td>P</td>
<td>P</td>
<td></td>
</tr>
<tr>
<td>Student Support</td>
<td>P</td>
<td>P</td>
<td>P</td>
</tr>
<tr>
<td>Transition Program</td>
<td>M</td>
<td>P</td>
<td></td>
</tr>
<tr>
<td>Vocational Education</td>
<td>M</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>Work Study</td>
<td>M</td>
<td>M</td>
<td></td>
</tr>
</tbody>
</table>

M = Moderate; P = Potential

This Fact Sheet is a collaborative effort between DCDT and the National Secondary Transition Technical Assistance Center (NSTTAC). NSTTAC is funded through the Office of Special Education Programs, Office of Special Education and Rehabilitative Services, U.S. Department of Education (Grant #H326J050004). However, the contents do not necessarily represent the policy of these agencies and endorsement by the federal government should not be assumed.