NTACT Effective Practices Matrix

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Objectives

• Gain knowledge of the process used by NTACT to identify secondary transition, VR, CTE, and Dropout EBPPs, including quality indicators and levels of evidence

• Gain resources to support implementing secondary EBPPs in school and community settings
Why Do We Care About EBPs?

• NTACT’s Purpose:
  
  – Assist **State Education Agencies, Local Education Agencies**, State VR Agencies, and VR service providers to **implement evidence-based and promising practices** ensuring students with disabilities, including those with significant disabilities, graduate prepared for success in postsecondary education and employment.
Why We Really Care About EBPs?

• When practitioners use practices that research has shown to be effective, student’s perform better (Cook, Tankersley, & Harjusola-Webb, 2008)

• As a result, practitioners need trustworthy resources that tell them what (transition) practices have the “best available evidence” or “best level of evidence”
NTACT’s Process to Determine Level of Evidence

1. Search the literature for studies on the chosen practice. A “practice” has three major components
   - What you do? (i.e., the intervention/independent variable)
   - What improves? (i.e., the target outcome/dependent variable)
   - With whom? (i.e., population)

2. Sort based on the type of study (i.e., group experimental, single-case, correlational, qualitative)

3. Review studies for adherence to quality indicators

4. Count how many high quality and acceptable quality studies support the practice

5. Compare to criteria to determine the level of evidence
Quality Indicators

• Set of criteria for different research methodologies, and if present, *indicate* study is high quality
  – Group Experimental (Gersten et al., 2005)
  – Single-Case (Horner et al., 2005; Kratochwill et al., 2010)
  – Correlational (Thompson et al., 2005)
  – Qualitative (Brantlinger et al., 2005; Trainor & Graue, 2014)

• Checklists can be found under “Additional Resources” at: [http://transitionta.org/effectivepractices](http://transitionta.org/effectivepractices)
Example: Single-Case

• Description of Participants and Settings
  – Participants are described with sufficient detail to allow others to select individuals with similar characteristics (e.g., age, gender, disability, diagnosis).
  – The process for selecting participants is described with replicable precision.
  – Critical features of the physical setting are described with sufficient precision to allow replication.

• Dependent Variable
  – Dependent variables are described with operational precision.
  – Each dependent variable is measured with a procedure that generates a quantifiable index.
  – Measurement of the dependent variable is valid and described with replicable precision.
  – Dependent variables are measured repeatedly over time.
  – Data are collected on the reliability or interobserver agreement associated with each dependent variable, and IOA levels meet minimal standards (e.g., IOA = 80%; Kappa = 60%).

• Independent Variable
  – Independent variable is described with replicable precision.
  – Independent variable is systematically manipulated and under the control of the experimenter.
  – Overt measurement of the fidelity of implementation for the independent variable is highly desirable.
Example: Single-Case

- Baseline
  - The majority of single-subject research studies will include a baseline phase that provides repeated measurement of a dependent variable and establishes a pattern of responding that can be used to predict the pattern of future performance, if introduction or manipulation of the independent variable did not occur.
  - Baseline conditions are described with replicable precision.

- Experimental Control/Internal Validity
  - The design provides at least three demonstrations of experimental effect at three different points in time.
  - The design controls for common threats to internal validity (e.g., permits elimination of rival hypotheses).
  - The results document a pattern that demonstrates experimental control.

- External Validity
  - Experimental effects are replicated across participants, settings, or materials to establish external validity.

- Social Validity
  - The dependent variable is socially important.
  - The magnitude of change in the dependent variable resulting from the intervention is socially important.
  - Implementation of the independent variable is practical and cost effective.
  - Social validity is enhanced by implementation of the independent variable over extended time periods, by typical intervention agents, in typical physical and social contexts.
NTACT’s Levels of Evidence

• Refers to the amount and quality of research supporting a practice

• NTACT has four levels of evidence:
  – Evidence-Based Practices
  – Research-Based Practices
  – Promising Practices
  – Unestablished Practices

• Quality and quantity to move up
## Level of Evidence Criteria

<table>
<thead>
<tr>
<th>Evidence-Based Practice</th>
<th>Details</th>
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</table>
| **Group Experimental Design** | - Two high quality\(^1\) or a combination of four high and acceptable quality\(^2\) studies using rigorous research designs demonstrating positive effects  
- Studies must calculate effect size or report data that allows for calculation  
- There is no evidence from a high or acceptable quality study demonstrating negative effects |
| **Single-Case Design** | - A combination of five high\(^3\) or acceptable\(^4\) quality studies using rigorous research designs demonstrating a functional relation and positive effects  
- Three independent research teams  
- There is no evidence from a high or acceptable quality study demonstrating negative effects |
| **Correlational** | - Two high quality \(a priori\) (planned, hypothesis stated) studies\(^5\) using propensity score modeling/ matching\(^6\) which demonstrate consistent significant correlations between predictor and outcome variables  
- Studies must calculate effect size or report data that allows for calculation  
- There is no evidence from a high \(a priori\) study demonstrating negative correlations between predictor and outcome variables |

\(^1\) High quality group experimental study must meet 1, 2, 3, 4, 6, 8, 9 & 10 and 5 or 7 of EQIs and at least 4 of the DQIs [Quality Indicator Checklist for Group Experimental Research](#)  
\(^2\) Acceptable quality group experimental study must meet 1, 2, 3, 4, 6, 8, 9 & 10 and 5 or 7 of EQIs and at least 1 of the DQIs Must calculate effect size or report data that allows for calculation [Quality Indicator Checklist for Group Experimental Research](#)  
\(^3\) High quality single-case study meets all quality indicators [Quality Indicator Checklist for Single-Case Research](#)  
\(^4\) Acceptable quality single-case study meets all QIs except 2 & meets one of 17-20 [Quality Indicator Checklist for Single-Case Research](#)  
\(^5\) High quality \(a priori\) studies must meet all quality indicators for correlational research  
\(^6\) High quality propensity score modeling studies must meet all quality indicators for correlational research
<table>
<thead>
<tr>
<th>Research-Based Practice</th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Experimental Design</td>
<td>• Two studies using rigorous research designs demonstrating positive effects (may or may not have not been reviewed for quality indicators)</td>
<td>• Studies must calculate effect size or report data that allows for calculation</td>
<td>• There are more studies using rigorous research designs showing demonstrating positive effects than studies using rigorous research designs demonstrating negative effects</td>
<td></td>
</tr>
<tr>
<td>Single-Case Design</td>
<td>• Three studies using rigorous research designs demonstrating a functional relation (may or may not have not been reviewed for quality indicators)</td>
<td>• Two independent research teams</td>
<td>• There are more studies using rigorous research designs demonstrating a functional relation and positive effects than studies using rigorous research designs demonstrating negative effects</td>
<td></td>
</tr>
<tr>
<td>Correlational</td>
<td>• A combination of two high or acceptable quality \textit{a priori} studies demonstrating consistent significant correlations between predictor and outcome</td>
<td>• Studies must calculate effect size or report data that allows for calculation</td>
<td>• There are more high or acceptable quality \textit{a priori} studies demonstrating positive correlations than high or acceptable quality \textit{a priori} studies demonstrating negative correlations</td>
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</table>

\[ 1 \text{ Acceptable quality } \textit{a priori} \text{ studies must meet 2, 3, 6, 7, 8, 9, 10, 11 of the QIs for correlational research} \]
### Level of Evidence Criteria

#### Promising Practice

| Group Experimental Design | • One study using a rigorous research design demonstrating positive effects  
|                          | - or - 
|                          | • Two studies using a weak research design demonstrating positive effects  
| Single-Case Design       | • One study using a rigorous research design demonstrating positive effects  
|                          | - or - 
|                          | • Two studies using a weak research design demonstrating positive effects  
| Correlational            | • One acceptable quality *a priori* study with consistent significant correlations between predictor and outcome  
|                          | - or - 
|                          | • Two acceptable quality\(^1\) exploratory (no specific hypothesis) studies with significant correlations between predictor and outcome  
| Qualitative              | • One quality\(^2\) qualitative research study  

\(^1\) Acceptable quality exploratory studies must meet 1, 3, 6, 7, 8, 9, 10, 11 quality indicators for correlational research  
\(^2\) Quality qualitative studies must meet 1, 2, 4, 5, 6, 7 and relevant data collection method quality indicators for qualitative research

#### Unestablished Practice

- Descriptive studies, anecdotal evidence, or professional judgement articles describing a practice
- More acceptable or high quality studies demonstrating negative effects, than quality studies demonstrating positive effects
What Did This Lead To?

• 127 practices and 19 predictors (at last count)
  – Varying levels of evidence
• Outcomes organized by relevant transition area
  – Education
  – Employment
  – Independent Living
• Population
  – Stated in practice descriptions
Where to Find These EBPPs?

Effective Practices and Predictors

NTACT is charged with assisting stakeholders in implementing evidence-based and promising practices and predictors that promote positive post-school outcomes for all students with disabilities. Throughout the website and other resources from NTACT, effective practices and predictors have been evaluated regarding the amount, type, and quality of the research conducted, and are labeled as either (a) evidence-based, (b) research-based, or (c) promising. Currently NTACT is not identifying "unestablished" practices, but recognizes that there is a body of practices in the field for which there is not yet evidence of effectiveness. These designations indicate the confidence one can have in the likely effectiveness of the intervention, when implemented as defined and recommended. Please see our descriptors definitions, criteria and about NTACT's level of evidence, if you are interested. Additionally, if you have questions about our ongoing process of reviewing practices and predictors, contact Dr. Laura Test, Director of NTACT.

NTACT has developed Practice Descriptions and Lesson Plan Starters for many of the Effective Practices and Predictors. Additionally, NTACT will link users to outside sources, such as the Rehabilitation Research and Training Center on Evidence-Based Practices for Vocational Rehabilitation (RRTC on EBPs for VR) for more detailed explanations of practices identified through other sources. In each of the Effective Practice Descriptions, the evidence for the practice will be indicated.

Effective Practices and Predictors Matrix

Evidence-Based Practices
- demonstrates a strong record of success for improving outcomes
- uses rigorous research designs
- adheres to indicators of quality

Research-Based Practices
- demonstrates a sufficient record of success for improving outcomes
- uses rigorous research designs

Promising Practices
- demonstrates some success for improving outcomes
- may use rigorous research designs
- may adhere to indicators of

Unestablished Practices
- demonstrate limited success for improving outcomes
- is based on unpublished research, anecdotal evidence, or

EVIDENCE
RESEARCH
PROMISING
UNESTABLISHED

Evidence-Based Practices
Research-Based Practices
Promising Practices
Unestablished Practices

Effective Practices and Predictors - Printable List
## Effective Practices and Predictors Matrix

<table>
<thead>
<tr>
<th>Level of Evidence</th>
<th>Relevant Outcome Area</th>
<th>Practice</th>
</tr>
</thead>
</table>
| Evidence-based Practices | Education | Student-focused Planning Practices  
- Published curricula to teach student involvement in the IEP  
- Student Development (Academic, Employment, and Life Skills) Practices  
  - Self-Determined Learning Model of Instruction (SDLM) to teach goal attainment |
| Employment | St.  
- Student Involvement in the IEP  
- Self-Determined Learning Model of Instruction (SDLM) to teach goal attainment |
| Independent Living | St.  
- Student Involvement in the IEP  
- Self-Determined Learning Model of Instruction (SDLM) to teach goal attainment |
| Research-based Practices | Education | Predictors of Postsecondary Education  
- Inclusion in general education  
- Occupational courses  
- Paid employment/work experience  
- Transition program  
- Vocational education  
- Youth autonomy  
- School Completion Practices  
  - Accelerated Middle Schools for staying and progressing in school  
  - Assist adult advocate for dropout prevention  
  - Check and Connect for staying and progressing in school |

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## Promising Practices

### Education
- Predictors of Postsecondary Independent Living
  - Career awareness
  - Interagency collaboration
  - Parent expectations
  - Self-advocacy/ self-determination
  - Self-care/ independent living skills
  - Social skills
  - Student support
- School Completion Practices
  - Career Academies for school completion
  - Job Corps for school completion
  - JOBSART for school completion
  - Social and Behavior Intervention Programs for dropout prevention
  - Talent Search for school completion
  - Together for staying in school
- Student-Focused Planning Practices
  - Check and Connect to promote student participation in the IEP meeting
  - Computer-assisted instruction to teach participation in the IEP process
  - Whose Future is it? to teach student knowledge of transition planning – practice description being updated

### Employment
- Predictors of Postsecondary Employment
  - Career awareness
  - Community experience
  - Exit exam requirements/high school diploma status
  - Interagency collaboration
  - Parent/ family involvement
  - Parent expectations
  - Program of study
  - Self-advocacy/ self-determination
  - Self-care/ independent living skills
  - Social skills
  - Student support
  - Transition program

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Using Constant Time Delay to Teach Food Preparation and Cooking Skills

What is the level of evidence?

This is an Evidence-Based Practice based on two high quality and four acceptable quality single subject studies.

Where is the best place to find out how to do this practice?

The best place to find out how to implement CTD is through the following research to practice lesson plan starter:

Using Constant Time Delay to Teach Food Preparation and Cooking Skills (Cont’d)

With who was it implemented?

- Students with
  - Moderate intellectual disability (6 studies, n= 23)
- Ages ranged from 9-18
- Males (n=9), females (n=14)
- Ethnicity
  - None reported (n=23)

What is the practice?

Constant time delay is a variation of time delay, a prompting procedure that uses variations in the time intervals between presentation of the natural stimulus and the response prompt. Time delay transfers stimulus control from a prompt to the natural stimulus by delaying the presentation of the prompt following the presentation of the natural stimulus. Constant time delay is implemented by presenting several trials using a 0-second delay between the presentation of the natural stimulus and the response prompt. The trials that follow the simultaneous prompt condition apply a fixed time delay (e.g., 3 seconds or 5 seconds; Cooper, Heron, & Heward, 2007).
Snack and Drink Preparation Skills

Objective: To teach students to make a sandwich, prepare a hot drink, and serve food.

Setting and Materials:
Settings: Special education classroom and lunchroom
Materials:
1. Items for making a sandwich (i.e., bread, cheese, sliced tomato, plastic plate, fork)
2. Items for preparing a hot drink (i.e., sugar, jar, water, kettle, tray, plastic glass, spoon)
3. Items for serving (i.e., sandwich, hot drink, tray, napkin)
Snack and Drink Preparation Skills

Content Taught

Task analyses to teach students to make a sandwich, prepare a hot drink, and serve food:

<table>
<thead>
<tr>
<th>Making a Sandwich</th>
<th>Preparing a Hot Drink</th>
<th>Serving</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Get the dish.</td>
<td>1. Plug the socket of the kettle in.</td>
<td>1. Get the tray.</td>
</tr>
<tr>
<td>2. Get the bread.</td>
<td>2. Open the lid of the kettle.</td>
<td>2. Put the tray on the counter.</td>
</tr>
<tr>
<td>3. Put the bread in the dish.</td>
<td>3. Pour a glass of water into the kettle.</td>
<td>3. Get the dish with the sandwich.</td>
</tr>
<tr>
<td>4. Separate the bread in half.</td>
<td>4. Shut down the lid of the kettle.</td>
<td>4. Put the sandwich dish on the tray.</td>
</tr>
<tr>
<td>5. Put the upper part of the bread in the dish.</td>
<td>5. Push the button which reads 1 to start the kettle.</td>
<td>5. Get the glass.</td>
</tr>
<tr>
<td>6. Get the cheese.</td>
<td>6. Open the lid of the jar.</td>
<td>6. Put the glass on the tray.</td>
</tr>
<tr>
<td>7. Put the cheese on the bottom part of the bread.</td>
<td>7. Put two or three teaspoons of oralet in the glass.</td>
<td>7. Get napkins.</td>
</tr>
<tr>
<td>8. Get the fork.</td>
<td>8. Open the lid of the sugar jar.</td>
<td>8. Put the napkins on the tray.</td>
</tr>
<tr>
<td>9. Get the tomato.</td>
<td>9. Put two or three teaspoons of sugar in the glass.</td>
<td>9. Take the tray from the counter.</td>
</tr>
<tr>
<td>10. Put the tomato in the bread.</td>
<td>10. Turn kettle off.</td>
<td>10. Take the tray to the table.</td>
</tr>
<tr>
<td>11. Place the upper part of the bread on the bottom part of it.</td>
<td>11. Pour the water from the kettle in the glass.</td>
<td>11. Put the tray on the table.</td>
</tr>
<tr>
<td>12. Put the kettle back in original spot.</td>
<td>13. Unplug the socket of the kettle.</td>
<td></td>
</tr>
<tr>
<td>14. Stir the ingredients in the glass with a spoon.</td>
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<td></td>
</tr>
</tbody>
</table>
Teaching Procedures

1. Start with a 0 second time delay trial as follows:
   a. Ask student, “Now we will make a sandwich together. Are you ready?”
      Once student says they are ready say “Please make a sandwich.”
   b. Provide the correct response and ask the student to do the same.
   c. Praise correct responses.
   d. Continue until the student is at 100% correct responses to the given prompt.

2. Start 4 second time delay as follows:
   a. Secure the student’s attention and give the skill instruction.
   b. Wait 4 seconds for the student to complete the first step.
   c. If the student correctly completed the steps within 4 seconds
      (unprompted correct response) praise student.
Teaching Procedures (Cont’d.)

d. Follow correction procedures as follows:
   i. If the student incorrectly responded (unprompted incorrect response) help the student respond correctly with simultaneous verbal and model prompts.
   ii. If the student was unable to respond with 4 seconds provide simultaneous verbal and model prompts.
   iii. If the student then correctly responds (prompted correct response) praise student.
   iv. If the student incorrectly responds despite the given prompts complete the given step and explain what you are doing.
   v. If the student did not respond complete the step for the student and move to the next step.

e. Continue until student is at 100% correct responses in at least 3 consecutive sessions.

* Other steps of the skills are completed in the same way. *
Evaluation

Record number of correct steps completed independently in each task analysis. Continue until student is at 100% correct responses in at least 3 consecutive sessions.

Lesson Plan Based on:

Using Individual Placement and Support (IPS) to Increase Opportunities for Competitive, Integrated Employment for Students and Youth with Disabilities

What is the level of evidence?

This practice was identified by Rehabilitation Research & Training Center for Evidence-Based Practice in Vocational Rehabilitation (RRTC -EBP VR), and has been labeled by NTACT as a Promising Practice. More information on NTACT’s process for identifying effective practices is available here: NTACT's Effective Practices.

What is the practice?

This practice uses braided funding between VR and the state mental health administration to provide blended services. Consumers eligible for mental health services are presumed eligible for VR and an Individualized Plan for Employment is developed within two weeks of referral. The program's philosophy is grounded in consumer choice and interests for employment. The research specifically describes a collaboration between the Maryland Department of Rehabilitative Services (DORS) agency and the Maryland's mental health administration.
Using Individual Placement and Support (IPS) to Increase Opportunities for Competitive, Integrated Employment for Students and Youth with Disabilities (Cont’d.)

Where is the best place to find out how to do this practice?

The Special Issue from the Journal of Vocational Rehabilitation is available through the website of the RRTC-EBP-VR here: http://content.iospress.com/download/journal-of-vocational-rehabilitation/jvr708?id=journal-of-vocational-rehabilitation%2Fjvr708

You may also correspond with the RRTC-EBP-VR http://research2vrpractice.org/contact/ to request more detailed information from the original author regarding implementation of this practice.

References used to establish this evidence base:

Effective Practices and Predictors

Additional Background Resources

- Predictors Correlated with Post-School Outcome Areas
- NSTTAC Executive Summary Evidence-Based Practices and Predictors
- Literature Map of Dropout Prevention Strategies
- RRTC-EBP VR
- Dropout Prevention Practice Guide
- Predictors Correlated with Post-School Outcome Areas
- Quality Checklist - Correlational Research
- Quality Checklist - Group Experimental Research
- Quality Checklist - Single Case Research
- Quality Checklist - Qualitative
Effective Practices and Predictors

Annotated Bibliographies

• **Family Involvement Annotated Bibliography**
  Annotated bibliography of resources on guidance and issues regarding parent and family involvement in the transition planning process.

• **Health Issues and Transition Planning Annotated Bibliography**
  Annotated bibliography regarding research and guidance for health issues and the transition planning process.

• **Sexuality and Transition Planning Annotated Bibliography**
  Annotated bibliography regarding sexuality and young adults with disabilities.

• **National Longitudinal Study - 2 Secondary Analyses Annotated Bibliography**
Effective Practices and Predictors

Quick Guides

– Competitive Integrated Employment
– Tier 1 Positive Behavior Interventions and Supports
– Tier 2 Positive Behavior Interventions and Supports
– Response to Intervention
The Search for EBPPs Continues…

• Currently 181 articles published from 2010 to present are under review.

• A preliminary review indicates:
  – additional research to support existing practices (e.g., peer supports, WAGES curriculum)
  – some new evidence-based practices coming your way
    • Additional self-management strategies (e.g., POW-TREE) for improving academic skills
    • Additional strategies to promote family engagement
    • Additional strategies to teach self-determination skills
The Search for EBPPs Continues…

• A preliminary review also indicates:
  – additional research to support existing predictors (e.g., Paid Employment, Self-Determination)
  – potentially some new evidence-based predictors coming your way (its too early to tell)
Invites You to…

- Explore our website:  [www.transitionta.org](http://www.transitionta.org)
- Sign up for our listserv:  [http://uncc.surveyshare.com/s/AYASDJA](http://uncc.surveyshare.com/s/AYASDJA)
- Follow us on Facebook [at transitionta](http://uncc.surveyshare.com/s/AYASDJA)
- ...and on Twitter [at transitionta](http://uncc.surveyshare.com/s/AYASDJA)
- ...and on Pinterest [at transitionta](http://uncc.surveyshare.com/s/AYASDJA)
- Contact us:  [ntactmail.@uncc.edu](mailto:ntactmail.@uncc.edu)
- David W. Test:  [dwtest@uncc.edu](mailto:dwtest@uncc.edu)