Selecting and Implementing Evidence-based Practices

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November 19, 2015

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Technical Support: Ivan Polk
Context

• SCTG awardees are expected to select and implement evidence-based practices that are within a multi-tiered behavior framework.

• Many Grantees have launched Tier I supports and are still considering Tier II and Tier III support options.
Context

• Growing concern in education about use of practices that are not evidence-based
  – Boardman, Arguelles, Vaughn, Hughes, & Klinger, 2005; Burns & Ysseldyke, 2009; Cook & Odom, 2013; Jones, 2009)
Resources

- Oregon – Proven Practices
- NIRN Hexagon Tool
- PBIS evidence citations
- Literacy evidence citations
- Math evidence citations
Goals

• Define a “practice”

• Define criteria for determining if a practice is “evidence-based”

• Define the larger protocols for selecting practices.
  – One state example (Oregon’s Proven Practices SOP)
  – The Hexagon Tool for use by Districts

• Provide examples of selecting practices for behavior support and academic support.
Evidence-based Practice in Education

• ...the modern era of evidence-based practice in medicine emerged in the early 1970s and 1980s (Bennett et al., 1987) and came into fruition in Great Britain in the early 1990s (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996).

• General and special education have followed suit in adopting scientific evidence as the appropriate basis for selecting teaching practices (Carnine, 1999; Davies, 1999; Oakley, 2002; IDEA 2006)
Defining a “Practice”

- An educational practice is a procedure (or set of procedures) designed for use in a specific context (or set of contexts) by a specific set of users to achieve defined outcomes for a defined population or populations.
Six Defining Features of a Practice

• **Procedures** are operationally defined
  – The procedures are observable

• The **settings** (or contexts) in which the practice is expected to be effective are defined

• The **target population** (or populations) for whom the practice is intended to be effective is defined

• The **qualifications of people** who may use the practice with success are defined

• The **outcomes** that may be expected from using the practice are defined

• The **conceptual theory** and basic mechanisms framing the practice are defined
Practices of Different Sizes

• A practice may be **small in scope** (e.g., the use of positive reinforcement to increase academic engagement),

• A **modest bundle** of procedures that address a narrow outcome (e.g., Good Behavior Game to improve classroom performance), or

• A **large package** of procedures that collectively target a major social issue (e.g., Direct Instruction to improve early literacy; Social Emotional Learning to improve social competence).
Are these “practices?”

- Whole Language Reading Instruction
- Positive reinforcement
- Inclusion
- IDEA
- Discrete trial training
- Proportion-of intervals with social engagement
- Facilitated communication
- Functional behavioral assessment
- Title I funding
- Restorative Practices

Procedures defined
Settings
Population
Qualifications of users
Outcomes
Conceptual Theory
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Just because it is a practice does NOT mean it is “evidence-based”
Is a Practice “Evidence-based”
What Works Clearinghouse

• Assess the quality of the research methodology
• Assess the relationship between the practice and the effect.
• Assess the magnitude of effect
“Evidence-based”
Council for Exceptional Children

- Assess the extent to which a practice is associated with valued outcomes:
  - **Strong**: Two RCTs, or at least 5 single-case studies documenting effects across at least three research groups and a total of 20 participants.
  - **Promising**: One RCT or 1-4 Single-case Studies
  - **Emerging**: Evaluation data documenting an association, but not a causal relation
  - **Insufficient**: Theory, but no formal data
  - **Contra-indicated**: Documentation of effects opposite of those intended.
Samples of Definitions for “Evidence-based”

“EBP in psychology is the integration of the best available research with clinical expertise in the context of patient characteristics, culture, & preferences.”
American Psychological Association, 2006

“EBPs are practices that are supported by multiple, high-quality studies that utilize research designs from which causality can be inferred & that demonstrate meaningful effects on student outcomes”
Cook & Cook, 2013

“Treatment or service, has been studied, usually in an academic or community setting, & has been shown to be effective, in repeated studies of the same practice and conducted by several investigative teams.”
National Alliance on Mental Health, 2007

“When programs & practices effectiveness have been demonstrated by causal evidence, generally obtained through high quality outcome evaluations.”
National Institute of Justice

“Causal evidence that documents a relationship between an activity, treatment, or intervention and its intended outcomes, including measuring the direction & size of change, & the extent to which a change may be attributed to the activity or intervention. Causal evidence depends on the use of scientific methods to rule out, to the extent possible, alternative explanations for the documented change”
National Institute of Justice

“Strong evidence means that the evaluation of an intervention generates consistently positive results for the outcomes targeted under conditions that rule out competing explanations for effects achieved (e.g., population & contextual differences)”
HHS SAMHSA, 2009

“An approach in which current, high-quality research evidence is integrated with practitioner expertise & client preferences & values into the process of making clinical decisions.”
ASHA, www.asha.org

“Process in which the practitioner combines well-researched interventions with clinical experience, ethics, client preferences, & culture to guide & inform the delivery of treatments & services”
Socialworkpolicy.org, 2015
Common Criteria

• Clearly define practices

• Empirical demonstration of effect
  • Research Design

• Replication of effect

• Documentation under “typical” conditions
Selecting A Practice:
“Evidence-based” is Important, but not the only consideration in selecting a practice

- State level decision-making
- District level decision-making
The Oregon Department of Education (DOE) is committed to continuously improving the quality and equity of educational opportunities for children and their families. Toward this end, DOE promotes efforts to identify, understand, demonstrate and disseminate evidence-based educational practices that will improve the effectiveness and efficiency of Oregon's schools. The present document describes:

(a) The core outcomes guiding the mission of education in Oregon,
(b) Recommended criteria for identifying educational practices for adoption

Identification of emerging, promising and proven practices is intended to assist state, district, building and classroom investment in educational improvement. When considering selection or adoption of new educational practices, consideration of the following criteria is encouraged.

Core Educational Goals

All educational practices will be assessed in part by the extent to which they advance core educational goals. The Oregon Department of Education exists to enhance the (a) academic achievement, (b) social development and (c) health & safety of all children in the state. Adoption of any new practice should include consideration of how that practice will facilitate these goals.
Oregon Department of Education

- **Emerging Practice**
  - Sufficient Scope
  - Precisely defined procedures
  - Professional development plan
  - Continuous improvement protocol (how to assess and improve)

- **Promising (above plus)**
  - Measure of fidelity
  - Validated through one Randomized Controlled Trial (RCT)
  - No studies documenting negative effects

- **Proven (above plus)**
  - At least 50 schools in Oregon have adopted the practice with fidelity and impact.
  - The practice is more effective and/or efficient than current alternatives.
Is PBIS Evidence-based

• Procedures
• Settings
• Users
• Outcomes
• Evidence documenting effect
• Conceptual Logic
One Example: Experimental Research on SWPBIS


One Example: Experimental Research on SWPBIS

SWPBIS Experimentally Related to:

1. Reduction in **problem behavior**
2. Increased **academic performance**
3. Increased **attendance**
4. Improved **perception of safety**
5. Reduction in **bullying behaviors**
6. Improved **organizational efficiency**
7. Reduction in **staff turnover**
8. Increased **perception of teacher efficacy**
9. Improved **Social Emotional competence**
The Technical Assistance Center on Positive Behavioral Interventions and Supports is established by the U.S. Department of Education’s Office of Special Education Programs (OSEP) to define, develop, implement, and evaluate a multi-tiered approach to Technical Assistance that improves the capacity of states, districts and schools to establish, scale-up and sustain the PBIS framework. Emphasis is given to the impact of implementing PBIS on the social, emotional and academic outcomes for students with disabilities.

**current topics**

**PBIS Implementation Blueprint**

**Equity and PBIS**
New practice guide ‘Examples of Engaging Instruction to increase Equity in Education’ posted.

**Special Issue of Education and Treatment of Children**

**School Climate Transform Grant**
PBIS Materials for School Climate Transformation Grants (SCTG) awareness. Webinar videos, contact information, events, and TA reports are available.

**Presentations**
States from Training & Conference Presentations. Please check the left side menu for 2015 Leadership Forum and previous Leadership Forum materials.

**PBIS Blueprints**
Blueprints for implementation, professional development, and evaluation of PBIS. Please check our updated ‘Implementation Blueprint’ (updated on Oct 13, 2015).

27 sites rated as “Trust” or “Trust with Caution”

20 sites rated as “Do not Trust”
Evaluating New and Existing Practices Across Your System

Using the Hexagon Tool through the Phases of Implementation
Thank you

- [http://implementation.fpg.unc.edu/](http://implementation.fpg.unc.edu/)
- The National Implementation Research Network’s Active Implementation Hub

The universe of possible solutions is large and expanding

- Internet searches
- Word of mouth
- *Nationally funded websites as clearinghouses of evidence-based practices*
Based on the work of Kiser, Zabel, Zachik, & Smith (2007) and The National Implementation Research Network (NIRN) and The State Implementation & Scaling-up of Evidence-based Practices Center (SISEP)
## The Hexagon Tool

**Exploring Context**

The Hexagon Tool can be used as a planning tool to evaluate evidence-based programs and practices during the Exploration Stage of Implementation.

See the Active Implementation Hub Resource Library [http://implementation.fpg.unc.edu](http://implementation.fpg.unc.edu)

### EBP:

<table>
<thead>
<tr>
<th>EBP</th>
<th>5 Point Rating Scale: High = 5; Medium = 3; Low = 1. Midpoints can be used and scored as a 2 or 4.</th>
</tr>
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<tbody>
<tr>
<td>Need</td>
<td><strong>High</strong></td>
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<tr>
<td>Fit</td>
<td><strong>High</strong></td>
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### Resource Availability

- Staff Competency
- Org. Support
- Leadership

### Evidence

- Outcomes – Is it worth it?
- Fidelity data
- Cost – effectiveness data
- Number of studies
- Population similarities
- Diverse cultural groups
- Efficacy or Effectiveness

©2013 Laurel Kiser, Karen Blase, and Dean Fixsen
Adapted from work by Laurel J. Kiser, Michelle Zabel, Albert A. Zachik, and Joan Smith (2007)
6 Evaluation Factors

- Need
- Fit
- Resource Availability
- Evidence
- Readiness for Replication
- Capacity to implement

The Hexagon Tool
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Total Score
Hexagon Tool  (Kiser, Blase, Fixsen, 2013)
# Exploring Need and Fit of an EBP

## Need
- Data demonstrating that efforts would meet specific need within the district

**Example:** Low attendance, low student performance in specific content areas

## Fit
- Priorities
- Implementation structures
- Other initiatives
- Stakeholder values

**Example:** Is there already an existing program at the elementary level? Is the proposed practice in alignment with stakeholder support (i.e. board, parents)?
Exploring Readiness and Resources

Readiness for replication
- Capacity for external and internal training and coaching
- Model demonstrations available
- Proposed program is well defined

Example: Does someone within the district have expertise in the area? Can someone be trained?

Resources
- Time, people, funds available
- Data systems and materials
- Administrative support

Example: Are there enough funds to purchase all the materials that define the proposed program?
Exploring the Evidence of the Proposed Practice

Evidence

- Consider source
- Proven track record to improve outcomes
- Converging evidence

Example: Which features must be implemented in order to get the desired impacts? What degree of certainty does available data offer?
## Literacy Example

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<tr>
<th>Evidence-Based Practice: Literacy Core Curriculum</th>
<th>Score</th>
</tr>
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<tbody>
<tr>
<td><strong>Need (Data &amp; Perception):</strong> “Schools are using different curricula and much of it is 10 years old.”</td>
<td>5</td>
</tr>
<tr>
<td><strong>Fit (Priorities &amp; Values):</strong> “Teachers are asking for up to date materials and are interested in supporting each other across the district.”</td>
<td>4</td>
</tr>
<tr>
<td><strong>Resource Availability (Materials, Staff, Data Supports):</strong> “How much will an adoption cost beyond just materials? How will we make time for teachers to attend PD, be coached, and plan for new materials?”</td>
<td>2</td>
</tr>
<tr>
<td><em>Capacity to Implement</em></td>
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<td>Capacity to Implement (Staff capacity, Coaching, Sustain, &amp; Buy-In): “What’s our process to establish buy-in? How will we sustain this adoption over time?”</td>
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<tr>
<td>Readiness for Replication (Experts, Mature Sites, &amp; Models): “Is there external expert support available? Can we observe schools already implementing?”</td>
<td>4</td>
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<tr>
<td>Evidence (Outcomes, Fidelity, &amp; Research): “Evidence of positive outcomes for similar schools? How many studies have been published or reviewed?”</td>
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## Resulting Action Plan

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<tr>
<td>• Build plan for long-term training of new staff</td>
<td>• Establish FTE for ongoing coaching</td>
</tr>
<tr>
<td>• Build plan for extra teacher planning time the first year of adoption</td>
<td>• Build plan for ongoing coaching</td>
</tr>
<tr>
<td>• Establish IT supports for fidelity monitoring</td>
<td>• Build plan for fidelity monitoring</td>
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Reflect on your PBIS and school climate practices...

What exploration steps has your district done a thorough job of completing?

• What steps could you go back and complete to strengthen buy-in and readiness for implementation of your practices?
Online Resources

• http://implementation.fpg.unc.edu/resources/hexagon-tool-exploring-context
• http://ies.ed.gov/ncee/wwc/
• http://www.intensiveintervention.org/
• http://www.rti4success.org/
• http://www.pbis.org/
• http://www.colorincolorado.org/
• http://crpbis.org/