Using Technology to Train and Implement Function-Based Support (FBA/BSP) 
A Panel Presentation

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PBS Applications

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Development and Testing of the FBSApp for Improving Parent and Child Outcomes

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Cross-site Collaboration

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Vanderbilt

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Illinois

Rationale: Challenging behaviors

- Challenging behaviors have been identified as a primary concern facing schools and families.
- Challenging behaviors identified in the preschool years are predictive of later adjustment difficulties and negative long-term outcomes.
- Parents of young children with persistent challenging behaviors report increased stress, lack of social connectedness, and reduced participation in community activities (Lucyshyn et al., 2007).

Rationale: Family supports

- The supports parents receive are crucial for yielding positive child outcomes (Powell & Dunlap, 2006), and the effectiveness of intervention is directly related to intervention fidelity (Barton & Fettig, 2013).
- Successful interventions to decrease challenging behaviors are based on developing collaborative relationships with families. However, for children older than 3 years, services are typically provided in schools.
- Most families of young children with disabilities do not have access to home-based supports for challenging behaviors (Lucyshyn et al., 2015).

Rationale: Family supports

- A recent survey of 144 parents of children receiving early childhood special education revealed that only 9% of parents were actively involved in their child’s services (Dunst & Bruder, 2015).
- Accessing ongoing support can be difficult for families with young children with disabilities.
Need for effective family supports

Homes
- Home-based supports for families of children with challenging behaviors.

Technology
- Mobile applications (apps) might provide an innovative, effective option for delivering ongoing support to families.
- Internet and smart phones are ubiquitous.

Mobile technology provides an opportunity to increase the accessibility and efficiency of support for parents of these children.

FBSApp is a mobile application to support parents in implementing functional assessment (FA)-based interventions, which work by determining the purpose (function) that a particular behavior serves for a child and using this information to develop a plan for reducing and preventing the behavior.

Secure Login

How to use this app tutorial

Professional Login

Demographic Information
Behavior Support Plan

Monitoring Progress

But will it work??
### Next steps...

- Satisfaction is high
- RCT is underway!
  - 60 families
- Single case data are being coded and analyzed

### Research Team

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Beth Pokorski</td>
<td>Kaitlin Greeny</td>
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<td>Marina Velez</td>
<td>Gounah Choi</td>
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<td>Claire Winchester</td>
<td>Shawna Harbin</td>
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<tr>
<td>Hidy Kong</td>
<td>Moon Chung</td>
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<tr>
<td>Karrie Karahalios</td>
<td>Rebecca Hacker</td>
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### Research Design

- Mixed Model Repeated Measures Randomized Group Design (156 ppts)
  - Teaching Routines (79 ppts)
  - Practiced Routines (77 ppts)
- Selection Criteria
  - Parents of children with ASD aged 3-8
  - Access to appropriate technology
  - Completion of consent/assessment
- Measures
  - Child behavior (SIBR, SDQ)
  - Parenting (PS, PSS, FQoL, BMPS)
  - Consumer satisfaction and knowledge

### Measures

- Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997)
- Scales of Independent Behavior Revised (SIB-R; Bruininks, Woodcock, Weatherman, & Hill, 1996)
- Parental Stress Scale (PSS; Berry & Jones, 1995)
- Parenting Scale (PS; Arnold, O'Leary, Wolff, & Acker, 1993)
- Family Quality of Life Survey (FQoL; Summers et al., 2005)
- Bangor Mindful Parenting Scale (BMPS; Jones, Hastings, Smits, Kavan, & Mans, 2014)
- Parent Knowledge (pre/post test designed for study)
- Consumer Satisfaction (questionnaire designed for study)
- Treatment Adherence ( fidelity: 94-99%, completion)
Comparison of Programs

<table>
<thead>
<tr>
<th>Features of Programs</th>
<th>Teaching Routines</th>
<th>Practiced Routines</th>
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</thead>
<tbody>
<tr>
<td>Online access to content via LMS</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Instruction to ABC principles (ABCs)</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Focus on improving family routines</td>
<td>✗</td>
<td>✗</td>
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<tr>
<td>Inclusion of real-life settings</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Homework activities using fillable forms</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Facilitated by parent educator in meetings</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Inclusion of mindfulness practice</td>
<td>✗</td>
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</table>

Curriculum Content

<table>
<thead>
<tr>
<th>Practiced Routines</th>
<th>Teaching Routines</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Introductions to program</td>
<td>1. Teaching the ABC method</td>
</tr>
<tr>
<td>2. ABC &amp; Mindful parenting</td>
<td>2. Creating a Plan</td>
</tr>
<tr>
<td>3. Homework checklist</td>
<td>3. Proactive strategies of teaching</td>
</tr>
<tr>
<td>4. Recording behavior</td>
<td>4. Teaching skills</td>
</tr>
<tr>
<td>5. Identifying patterns (ABCs)</td>
<td>5. Managing consequences</td>
</tr>
<tr>
<td>6. Tracking progress</td>
<td>6. Routine-based plan</td>
</tr>
<tr>
<td>7. Creating a plan</td>
<td>7. Putting teaching plan in action</td>
</tr>
<tr>
<td>8. Ongoing applications</td>
<td>8. Overcoming obstacles</td>
</tr>
<tr>
<td>10. Reliability website</td>
<td>10. Reliable websites</td>
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</tbody>
</table>

Results - Parents

- Family Quality of Life
  - Teaching Baseline: 0.6
  - Practiced Baseline: 0.7
  - Follow-up: 0.8

- Parental Self Efficacy
  - Teaching Baseline: 0.6
  - Practiced Baseline: 0.7
  - Follow-up: 0.8

Results - Children

- SIB-R (Adaptive)
  - Teaching Baseline: 60
  - Practiced Baseline: 65
  - Follow-up: 70

- SIB-R (Maladaptive)
  - Teaching Baseline: 40
  - Practiced Baseline: 35
  - Follow-up: 30

Consumer Satisfaction

- Satisfaction reported for PR program was significantly higher, $F_{(1, 143)} = 4.09, p = .045$
- In particular, these areas were significant:
  - access to information about parenting a child with ASD
  - plan to use the teaching strategies in the program
  - desire for more training in the format offered
- Elements of PR program noted in open-ended responses include flexibility, quality of resources, interacting with other parents, and guidance by parent educator (mindfulness was mixed)
General Conclusions

• Brief, online training may be an effective and acceptable alternative for teaching the principles of PBS
• Having technology-based resources may improve the integrity of implementation
• There may be implications for multi-tiered systems
  - Self-directed programs for independent learning
  - Facilitating group program using video meetings
  - Use of technology to support intensive interventions

Integrating behavior support and team technology

Scott A. Spaulding
University of Washington

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Rationale behind the technology

Challenges to implementing behavior supports
ibeStt leverages technology as an implementation tool

“Behavioral intervention plans (BIPs) not being followed – often because all staff either do not have access to or do not understand their responsibility to implement the BIP”
(Trends in Citizen Complaints, IEP Implementation, State of WA, Office of Superintendent of Public Instruction, 2019)

ibeStt

Online coaching and collaboration tool that guides school teams in the implementation of an evidenced-based process for delivering supports to teachers of students with persistent challenging behavior
Key components: Training and PD
Current implementation

- 2018-2019: 18 schools, 3 districts, WA and OR
- Ease of technology user interface
- Increase in knowledge, beliefs about behavior support
- Improvements in FBA/BIP
- Implementation in stages
- Early childhood version will expand family role and web-based coaching

Acknowledgements

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- Sheldon Loman, PhD
- Kathleen Strickland-Cohen, PhD
- Portland State University
- Texas Christian University
- TASN Team
- Lee Slickie, Eddie Croissant, Tyler Collier,
- Chris Perry, Susan Danner, Jamie Wolfe, Peggy Lawrence, Casey Peine

Basic FBA to BIP

Building Capacity for Function-Based Support in Schools

www.BasicFBA.com
OR
http://moodle.tasnatbs.org/

Basic FBA to BIP: A Proactive Approach to Behavior Support Planning

- Many of problem behaviors that teams encounter do not require comprehensive FBA-BSP
- Using simplified FBA-BSP procedures that “match” the level and intensity of problem behavior
- Provide FBS at the first signs of persistent problem behavior

Basic FBA to BIP

www.basicfba.com
Basic FBA to BSP Training Series

Loman, Strickland-Cohen, Borgmeier, & Horner (2014)

- Module 1 - Defining & Understanding Behavior
- Module 2 - FBA: Practice Interviewing
- Module 3 - FBA: Practice Observing
- Module 4 - Critical Features of BIP
- Module 5 - Building BIP from FBA
- Module 6 - Implementation Plan & Leading a BIP team
- Module 7 - Evaluation Planning and BIP Review Meeting

Modules 1 & 4 are to be completed with all staff in the school.

Basic FBA to BIP e-learning modules

Module 1 Objectives

By the end of this module you should be able to:

1. Define observable behavior (What).
2. Identify events that predict Where & When the specific behavior occurs.
3. Identify Why a student engages in the specific behavior.

ABC Tracker

Teacher completes in Classroom

Module 2 – FBA Interviews

- Step by Step Training w/ video model and practice activities

Office Referral Form

Example Office Referral Form Office Referral Form

Video Example: Student Strengths

Module 2 – FBA Interviews

- Step by Step Training w/ video model and practice activities
Module 3 – FBA Observations
- Step by Step Training w/ video model and practice activities

Module 4 & 5 – Function-Based Intervention
- Training to Identify Function-Based Interventions using information from the FBA
- Develop a Competing Behavior Pathway w/ a Replacement Behavior
- Identify interventions to Prevent, Teach, Reinforce & Correct Behavior
- Identify Successive Approximations to support the student to progress from the Replacement Behavior to the Desired Behavior

Module 6 – Implementation Plan

Module 7 – Evaluation Plan & BIP Review Meeting

Research suggests Daily Self-Monitoring by the implementer is an effective and feasible strategy for supporting implementation & collecting implementation data to inform feedback

Data-Based Decision Making
Basic FBA to BIP: Planning to Maximize Implementation

Respondents/Completers

<table>
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<tr>
<th>Module</th>
<th>BasicFBA.com</th>
<th>TASN Moodle</th>
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<td>1132</td>
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Panel Discussion
Any Questions?
Questions for the Panel:

- When using technology to train or support function-based support in schools/homes/community...
- What is necessary to maximize the effective use of your technology application in practice (in schools/home/community)?
- What are challenges to implementation & transfer of training?
- What steps are you taking with your technologies to support his transfer and to maximize use of the technology?

Professional Development in Schools

- Training efforts should result in both:
  - Changes in educator behavior that lead to improved student outcomes
  - Changes in organizational or systems-level practices
    - [Reinke et al., 2014]

- It’s going to take more than training and tools...

Thank you for Coming!

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  - Chris.Borgmeier@pdx.edu

Resources

- Home/Family Based Technology Supports
  - Family Behavior Support App
    - https://vkc.mc.vanderbilt.edu/fbs/
  - Practices Routines
    - www.practicedroutines.com

- School Based Technology Supports
  - Ibestt
    - www.ibestt.org
  - Basic FBA to BIP
    - www.basicfba.com
  - APBS Interactive Tutorials