What is an Evidence Based Intervention? Choosing and Implementing Academic and Behavior Interventions That Work.

MU COLLEGE OF EDUCATION
A College on the Move

The current dilemma for educational professionals

- 1) Problem Solving Models (RTI) essentially mean interventions for everyone in need
  - Essentially any child not responding is considered in need.
- 2) No Child Left Behind and IDEIA mandate accountability, or that we have defensible outcome data on all interventions
- 3) Traditional models have been focused on spending a great deal of time coming up with recommendations about a child's needs
  - Assessment orientation – Hours of assessment and report writing followed but meeting time
  - Traditional Consultation orientation – A number of consultation sessions allowing a consultee to come up with intervention idea

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The current dilemma for educational professionals

- So…
  - More cases
  - Higher levels of accountability
  - And traditional methods assume there is lots of time…

Selecting Interventions Quickly: "The Reasonable Hypothesis"

▸ Time is a precious commodity. Educators need to be efficient when problem solving.

▸ Under many circumstances, the most efficient thing to do is to test the easiest hypothesis first, implement an intervention, and monitor and evaluate outcomes.

▸ If that approach fails to improve student performance, then something progressively more time intensive can be attempted until the probable cause of failure is identified.
  ◦ Also, easier solutions are more likely to be implemented consistently while solutions which are more time consuming or technically difficult for teachers and support personnel are less likely to be implemented correctly (Gresham, 1989).

What are EBI in Schools?

▸ Tier I EBI – Whole school best practices

▸ Tier II EBI – Functionally Related Small Group Practices

▸ Tier III - Individually Functionally Based EBI

▸ NOTE – EBI are a very different thing in Tiers 1 and 2 than Tier 3! This is a critical and not well understood issue…

Tier 3 (5%)
Functionally Based EBI

Tier 2 (15%)
Functionally Related Small-Group and Individual EBI

Tier 1 (80%)
Evidence-Based Curricula
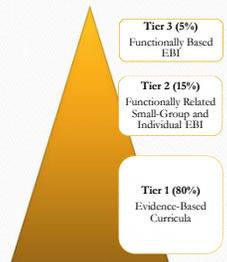
Tier 2 and 3- EBI Fine Print I

▸ EBI are validated for a specific purpose with a specific population

▸ Implication
  ◦ EBI are only useful for a range of problems and as such, must be paired up with the right situation
    • A hammer is an effective tool, but not with a screw

Tier 2 and 3 - EBI Fine Print II

- EBI assumes implementation integrity

- Implication
  ◦ Changing parts of an intervention, while typical, can invalidate the EBI
  ◦ Ways to change an intervention
    • Frequency
    • Materials
    • Target
    • Style
    • On and on and on….

Tier 2 and 3- EBI Fine Print III

- EBI are typically validated with large group research, or a series of small group studies
- Implication
  ◦ EBI have been documented as likely effective, not surely effective
  ◦ Even the most effective interventions are often ineffective with a specific case
  ◦ As such, you cant assume an EBI will always work

Implications of the Fine Print

- A list of EBI is just a nice place to start
- Additional steps
  ◦ Need to select EBI that make sense for the current case
  ◦ Need to implement the EBI with integrity
  ◦ Need to evaluate the effectiveness in some manner to see if it worked

General Goal of Intervention Selection

- Make a sound decision quickly
- Try the selected intervention
- Evaluate the intervention
- Recycle/escalate if necessary

The Evidence Based Intervention Network

University of Missouri — School Psychology at Mizzou IU ECU

Evidence Based
Intervention Network

The Evidence Based Intervention Network

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Evidence Based
Intervention Network

- Created and maintained by the MU, IU and ECU School Psychology Programs
- Presents EBI associated with the 5 common reasons for academic and social behavior problems each year
- http://ebi.missouri.edu

EBI Network Main Page

EBI Network Academic Interventions Page

EBI Network Behavioral Interventions Page

EBI Network Sample Intervention Brief

EBI Network Sample Intervention Modeling YouTube Video

Using the EBI Network For Tier 2 and 3 Interventions

▸ Using this model, a teacher or problem solving team is asked to consider what they think the most likely reasons are for the academic or behavior problems.

　◦ Once selected, these hypothesized reasons are then used to select interventions.

　◦ If there are more than one likely reasons selected, they should be rank ordered (from most to least likely).

Using the EBI Network For Tier 2 and 3 Interventions

▶ Selected interventions should be customized to the teacher with care not to alter the function
  ◦ Change the icing – not the core ingredients
▶ Implement
▶ Collect Outcome Data
▶ Analyze

The true documentation that an intervention is "evidence based" for a specific case occurs only when there is outcome data indicating a change in the target behavior.

Functional EBI Selection with Extended Analysis

or

Practical Functional Assessment/Analysis

Let's Talk About "Functional Assessment"

▶ What does this term refer to?
▶ What does this look like in practice?
▶ What happened to the "analysis"?

School-based Functional Assessment in 2012

▸ A "high incidence" approach
  ◦ Flexible rather than prescriptive
  ◦ Focused on "Intervention effectiveness" rather than functional documentation
  ◦ Multi Function
▸ Followed by functional analysis rather than done in isolation

Common Reasons Why Students Misbehave

1. Classwide problems
2. Student has not learned the behavior
3. Inappropriate behavior removes student from what they do not want to do (escape)
4. Inappropriate behavior gets the student something (typically attention)
5. They have not had to do the behavior in that way before

Selecting EBI's that Align with Function

Examples :

1. Good Behavior Game
2. Check In Check Out (CICO)
3. Non-contingent reinforcement (NCR) – attention seeking
4. Antecedent modification – escape
5. Instructional Match -- pre-requisite or skill / ability

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Classwide Problems

- Sometime multiple children in the classroom are exhibiting similar behavior problems.
- *Solution: A classwide behavior intervetion!*
- EBI Network Intervention: Good Behavior Game
  - *http://ebi.missouri.edu/wp-content/uploads/2011/09/Good-Behavior-Game.pdf*

Selecting EBI's that Align with Function

What is Check in Check Out (CICO)?

- Empirically supported strategy for reducing problem behavior
- Relatively quick & easy; provides structure
- Increases positive adult contact
  - *Excellent intervention when* **function of behavior is attention seeking**
  - *Also useful for kids* **who escape because they don't want to do a task if teach praise is more reinforcing than the task is punishing**

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Selecting EBI's that Align with Function

CICO Elements

1. Focus on teaching
2. Check-in/Check-out System
3. Daily classroom report card
4. Home-School partnership
5. Collaborative team-based process

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Selecting EBI's that Align with Function

Who is CICO for?

- Engages in externalizing behaviors
- Less than 15% of students
- Students with multiple referrals (2-5 majors)
- Students who receive several "minor" referrals
- Students who receive referrals in multiple settings
- Students who find adult attention rewarding

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Selecting EBI's that Align with Function

Benefits of CICO:

- Increased structure, feedback and adult support on a daily basis

- Daily home/school communication and collaboration

- Data is collected, reviewed and used to make decisions about the intervention success (or lack there of)

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http://miblsi.cenmi.org/

Selecting EBI's that Align with Function

Non-contingent reinforcement (NCR)

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Selecting EBI's that Align with Function

Brief Description of NCR:

◦ NCR is a powerful method to reduce problem behavior. NCR involves giving the student access to a reinforcer frequently enough that they are no longer motivated to exhibit disruptive behavior to obtain that same reinforcer.

▪ e.g. saturate the environment with the reinforcer BEFORE the behavior occurs

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Selecting EBI's that Align with Function

Example: Student wants teacher attention and calls out or engages in disruptive behaviors to get attention consistently during a group activity like art or story time.

Possible Solution: Teacher will provide appropriate attention prior to the child "asking" for attention with the "problem behavior" – e.g. have the student sit with the teacher while she is reading the book

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Selecting EBI's that Align with Function

Critical Components for Success:

1. You need to **identify the reinforcer** for the problem behavior – It will NOT WORK if you do not know the function of the disruptive behavior
   * The problem behavior must be attention seeking
2. You need a **schedule for delivery** of NCR that minimizes problem behavior
   * NCR is most effective with a heavy dose of reinforcement early in the day
3. Must **ignore problem behavior** once schedule is initiated
4. Should **fade the process** as problem behavior declines – but make sure child doesn't reengage in behavior by fading too quickly
   * Slowly reduce the amount of NCR given. NOTE – NCR is good teaching practice so it should never be "stopped"

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Selecting EBI's that Align with Function

Antecedent Modification

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Selecting EBI's that Align with Function

Brief Description on Antecedent Modification:

◦ The student doesn't have to do something when they exhibit the problem behavior

◦ The problem behavior is "working" for the child by allowing them to **escape** something they don't want to do.

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Selecting EBI's that Align with Function

Example:

- Student wants to escape a non-preferred activity such as math or gym. Every time the teacher announces the start of the specific activity, the student starts engaging in disruptive behaviors (e.g. runs away, shouts out, pretending to sleep, etc.)

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Selecting EBI's that Align with Function

Possible Solutions (4):

- **Minimize need for the escape by making the target activity less punishing!**

- Alter antecedents to increase task engagement, appropriate behaviors and general success
  - For example, pre-teaching, offering choices and modeling

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Selecting EBI's that Align with Function

Critical Components for Success:

◦ Positive reinforcement (e.g. praise) for engaging in activity

◦ Reinforce appropriate behaviors in shorter intervals initially (e.g. change the schedule of reinforcement or task demand)

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Selecting EBI's that Align with Function

Instructional Match

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Selecting EBI's that Align with Function

Brief Description / Function

- **Escape behavior related to academic task that are simply "Too Hard" -**

  - The student might not be successful because the instructional materials are too difficult or they may not have the pre-requisite skills

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Selecting EBI's that Align with Function

- A mismatch between student skill and level of difficulty of task – the assessment of a student's current instructional level is INACCURATE in some way (e.g. knowledge, difficulty, pace, level, etc.)

- **Children who are failing academically are frustrated and often act out!**

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Selecting EBI's that Align with Function

Examples:

- Addition math problems without being able to count
- Journal writing without being able to form 2-3 word sentences
- Drawing without fine motor skills like pencil grip
- Running without proper gait
  - can only walk on tippy toes

Possible Solutions:

- Pre-teach content / skill
- Reduce the task difficulty
- Breakdown tasks into smaller more manageable subtasks
- Curriculum based assessment or measurement to determine appropriate instructional level

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Selecting EBI's that Align with Function

Critical Components for Success:

- Must be able to accurately assess student's CURRENT level of ability AND implement a curriculum and teaching materials that are appropriate to the student's instructional level

- Must MATCH task demands and with current skill level to ensure success

- Differentiate instruction whenever possible and appropriate

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Selecting EBI's that Align with Function

Learned Helplessness Studies

(Seligman & Maier, 1967)

- Underestimate performance, behavior problems
- LOW motivation, expectations, perceived control, confidence
- Repeated failure + generalization of failure
- learned helplessness response style
- Focus on limitations, weaknesses

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Problem Solving Materials

Bare Bones Problem Solving Team Meeting Form

Meeting Date: _____

Student Name: _____   Teacher Name: _____

What is the problem behavior/academic concern? _____
_____

When does it happen? _____

How often does it happen? _____

What data (e.g. DIBL, ODR) has been collected? If baseline data has been collected please attach a graph.
_____

What logical reason that the child is engaging in the problem behavior/academic difficulty?

Behavior Problems	Academic Problems

• Attention Seeking/Get Something
• Escape Something
  ○ Escape an academic task
  ○ Escape a social situation
• They don't know how to do the right behavior
	• The task is too hard for the student
	• The student has not had enough help doing the task
	• The student needs more practice
	• They have not done the task this way before
	• The student does not want to do the task

What EBI/s would help with this problem? _____

Intervention Plan Details (can attach an EBI Brief if relevant)

1. _____
   _____
   _____

2. Who will do the intervention: _____

3. When will it be done: _____

4. How will the intervention be monitored: _____

When will a follow-up meeting be scheduled? _____

Suggested Attachments: Evidence Based Intervention Brief, Blank Outcome Data Graph, Tier Two Intervention Suggestion Form

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Problem Solving Materials Continued

Problem Solving Team Intervention Suggestion Form

Step 1: Consider function and select a relevant intervention

Reason for Behavior Problem	Sample Behavior Interventions
Classwide	Good Behavior Game Response Cost Raffle
Acquisition	Say, Show Check Sit and Watch
Proficiency – Gains Something (e.g. Attention)	Noncontingent Reinforcement Behavior Contracts Check In Check Out
Proficiency - Escape	Choice of Task Sequence Antecedent Modifications (Individual or Classwide) Instructional Match (if academic escape)
Generalization	Incorporate Functional Mediators Reinforce Natural Occurrences

Reason for Academic Problem	Sample Academic Intervention
Acquisition	Cross Age Peer Tutoring Instructional Match
Proficiency – Accuracy	Cover, Copy Compare Response Cards
Proficiency – Speed	Repeated Readings Incremental Rehearsal
Generalization	Incorporate Functional Mediators Reinforce Natural Occurrences

Step 2: Consider severity and instrumentize/proceduralize the intervention in an appropriate manner (more intense for those in the orange range of Tier 2). Please see the following breakdown of Tier 2.

Where to More Find Interventions

- Where to Find More Interventions
  - In the classroom (Riley-Tillman and Chafouleas, 2003)
    - Certain treatments are more effective
    - Certain treatments are more relevant
    - Treatment integrity is key
    - Interventions need to be tailored
    - Interventions are more variable than effective
- Texts such a Rathvon's *Effective School Interventions*
- Web resources for evidence-based intervention strategies
  - *Big Ideas in Beginning Reading* (U of Oregon): http://reading.uoregon.edu/
  - *What Works Clearinghouse* (US Dept of Education): www.w-w-c.org
  - Intervention Central: www.interventioncentral.org

Back to the RTI Focus

- Considering the nature of EBI – what role does "function" and "integrity" play in a "non-responder"?
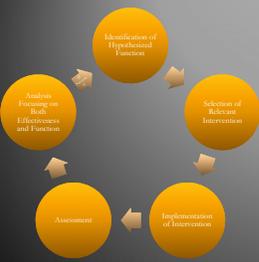
- How do we deal with this issue?

Intervention/Functional Analysis

- Keys
  - Model combine two issues, function and intervention
  - It is assumed that most cases will be multi function
  - It is assumed that interventions will be altered in the natural environment

Identification of Hypothesized Function

Selection of Relevant Intervention

Analysis Focusing on Both Effectiveness and Function

Implementation of Intervention

Assessment

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