

Evidence-Based Practices: What, Why, Where and How?

Georgia Department of Education
Division for Special Education Services
and Supports

Learning Targets

- I can define Evidence-Based Practices or Interventions.
- I can name three reasons why Evidence-Based Practices/Interventions should be used with students
- I can access and utilize two electronic resources to aid in the selection of appropriate evidence-based practices/interventions.
- I can describe how to look at the research for an EBP and determine the level of evidence associated with it

Evidence-Based Practices (EBPs)

from the National Center on Response to Intervention (NCRTI)

Content Specific

Developmentally
Appropriate

Learner
Dependent

Supported by
Research

Definition of EBP...

“Evidence-Based Practice is using multiple sources of evidence to find effective **interventions** that are most likely to work for children and families in a particular context.”

From the Video – “Got Evidence – An Animated Video with Some Questions and Answers about Evidence-Based Practices in Early Childhood”- National Center for Systemic Improvement (NCSI)

More Clarification

- “An Evidence-Based Practice (EBP) approach to intervention is the process of designing, implementing, and evaluating interventions, regardless of whether that process is implemented by an individual or within a team-based framework.”
- “Evidence-Based Interventions (EBI) are strategies, practices, and programs with available research documenting their effectiveness and data suggesting that they are enhancing student outcomes.”

Burns, Matthew K., et al. “Introduction.” *Effective School Interventions: Evidence-Based Strategies for Improving Student Outcomes*, The Guilford Press, 2017, pp. 4.

Putting It All Together

Evidence-Based Practices are...

- Content specific
- Learner dependent
- Developmentally appropriate
- Supported by multiple sources of evidence or research as being effective in working with the student(s) we plan to use them with
- Implementing them the way they were designed
- Monitoring their implementation to ensure they are being implemented the way they were designed (implementation fidelity)
- Monitoring their effectiveness on student outcomes (progress monitoring)

Interventions are NOT...

- Preferential seating
- Shortened assignments
- Parent contacts
- Classroom observations
- Suspension
- Doing MORE of the same
- Retention
- Peer helpers (informal)
- Co-teaching
- ABC Data Collection/Analysis
- PBIS



Strategies

A loosely defined collective term that is often used interchangeably with the word “intervention”; **however strategies are generally considered effective instructional and behavioral practices** rather than a set of prescribed instructional procedures, systematically implemented.

(GaDOE RTI Guidance)

So What Are Interventions?

Targeted instruction that is based on student needs. Interventions supplement the general education curriculum. Interventions are a systematic compilation of well researched or evidence-based specific instructional strategies and techniques.

(GaDOE RTI Guidance)

Intervention Non-Negotiables

- Be **connected to a specific goal** that is well-defined observable and measurable
- **Have specific, defined, step-by-step descriptions** so they can be
 - Implemented consistently
 - Can be replicated
- **Include ongoing data, progress monitoring** of the student's response to the intervention
- Measures of **fidelity** to assure implementation and **coaching supports**

Why Should We Use EBPs?

Treatment A

- Has been subjected to a great deal of rigorous research
- Worked for most people, most of the time
- Is rated as very effective

Treatment B

- Has been used in one or two research studies
- Supported by a few anecdotal reports
- Is rated as moderately effective

The IRIS Center. (2014). *Evidence-Based Practices (Part 1): Identifying and Selecting a Practice or Program*. Retrieved from https://iris.peabody.vanderbilt.edu/module/ebp_01/

Why Should We Use EBPs?

Increases in...

- Positive outcomes for students
- Accountability
- Support from administrators, parents and others
- Responsiveness to learner needs
- Student effort

Decreases in...

- Wasted time
- Wasted resources

Justification for Implementing EBPs

- The **Individuals with Disabilities Education Act (IDEA 2004)** includes numerous references to “scientifically based instructional practices” and “research-based interventions.”
- **Every Student Succeeds Act (ESSA)** requires the use of “Evidence-Based Interventions” and it goes on to outline the level of evidence required.
- In 2014 the Office of Special Education Programs (OSEP) began to focus not only on compliance but also improving results or outcomes for students with disabilities or the **State Systemic Improvement Plan (Indicator 17)**.
- **Response to Intervention (RTI)** and a **Multi-Tiered System of Support (MTSS)** it calls for the use of evidence-based instructional practices and interventions.

Evidence is Important, But It's Not the Only Thing

From the IRIS Center

- You need to take into account the unique characteristics of the children and families or students you are working with and the setting in which the practice or program will be implemented.
- You must consider your local resources and whether or not the EBPs can be supported.

Resources for Evaluating & Selecting Evidence-Based Practices

Adapted from the National Center on Intensive Intervention (NCII)

NCII Interventions Tools Chart

<https://charts.intensiveintervention.org/chart/instructional-intervention-tools>

What Works Clearinghouse

<https://ies.ed.gov/ncee/wwc/>

Best Evidence Encyclopedia

<http://www.bestevidence.org/>

Resources for Evaluating & Selecting Evidence-Based Practices

Adapted from the National Center on Intensive Intervention (NCII)

**Evidence for
ESSA**

<https://www.evidenceforessa.org/>

**Promising
Practices
Network**

<http://www.promisingpractices.net/>

**Center on
Instruction**

<https://www.centeroninstruction.org/>


Levels of Evidence

ESSA recognizes **four** levels of evidence. The top three levels require statistically significant effect on improving student outcomes or relevant outcomes




1. Strong Evidence
2. Moderate Evidence
3. Promising Evidence
4. Rationale-Evidence Building
(not available for SIG schools)

GaDOE Federal Programs Guidance



Selecting Evidenced-Based Interventions
Local Educational Agency (LEA) Guidance



[Find the Resource Here](#)

- Every Student Succeeds Act (ESSA) requires the use of Evidence-Based Interventions
- Outlines four levels or categories of evidence that can be considered when selecting EBPs

What is Meant by Effect Size?

- Researchers analyzing experimental and quasi-experimental research to determine which are most effective, commonly use the method of meta-analysis.
- In a meta-analysis, the results from each study are converted into a common unit of measure called an **Effect Size (ES)**.
- **ES** expresses the difference in outcomes between the group that received the intervention and the group that did not receive the intervention in standard deviation units.

Burns, Matthew K., et al. "Introduction." *Effective School Interventions: Evidence-Based Strategies for Improving Student Outcomes*, The Guilford Press, 2017, pp. 9-10.

What is Meant by Effect Size?

- Cohen's (1998) guidelines are most commonly used to interpret ES:
 - An ES of 0.20 indicates a small or mild effect
 - An ES of 0.50 indicates a medium or moderate effect
 - An ES of 0.80 indicates a strong effect
- According to the What Works Clearinghouse, an ES of 0.25 is the smallest positive value at which ES is “substantively important.”

Burns, Matthew K., et al. “Introduction.” *Effective School Interventions: Evidence-Based Strategies for Improving Student Outcomes*, The Guilford Press, 2017, pp. 9-10.

Strong Evidence

- Experimental Study/Randomized Control Study
- Randomly assigned to treatment or control group
- This leads to the greatest confidence in the outcomes being a result of the intervention and not the characteristic of the learners that may have varied from the start

Moderate Evidence

- Quasi-experimental Study
- Does not include true random assignment
- Participants are matched on a number of characteristics (i.e., socio-economic status, reading ability prior to study) ensuring that participants are similar to one another
- This helps ensure you can count on the outcomes being attributed to the intervention and not to learner characteristics

Promising Evidence

- Correlational Study
- Identifies a correlation between two variables (i.e., reading test scores and number of minutes of reading instruction in minutes per week) using statistical controls to eliminate bias (i.e., the use of a pretest to statistically control for differences between participants to increase the likelihood that the intervention is responsible for improvement and not great variability in learner knowledge prior to intervention)

Demonstrates a Rationale

- Based on high quality research findings or evaluation
- A vendor or district may have developed an intervention program based upon previous research that indicates the practice is effective (i.e., a reading fluency intervention based upon the body of research that supports that repeated reading is effective in improving reading fluency)
- This level of evidence should be used to develop a logic model when the vendor does not have research meeting the first three levels outlined above

Can I Answer These Learning Targets?

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