

Advancing School Leadership for Continuous Improvement

# MTSS: Building a Robust Tier I System

Winter Instructional Leadership Conference  
February 25-26, 2020

Karen Suddeth, Program Manager/Project Director  
Jody Drum, Regional Coach



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## Session Norms

- Place electronics on silence/vibrate.
- Remain engaged in learning.
- Respectfully share opinions.
- Ask questions for clarification to avoid making assumptions.



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## Session Goals

- Provide overview of Georgia's Tiered System of Supports for Students.
- Define and explain the relationship between evidence-based practices (EBPs) and High-Leverage practices (HLPs) to build a robust Tier I Primary Level of Prevention.
- Examine existing tools and resources to select, evaluate, and support implementation of Tier I Primary Level of Prevention.
- Reflect and consider next steps to strengthen or refine your current Tier I Primary Level of Prevention.

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## Georgia's Tiered System of Supports for Students

### A National Definition

- A tiered system of supports integrates assessment and intervention within a school-wide, multi-level prevention system to maximize student achievement and reduce behavioral problems.
- Promotes systems alignment to increase efficiency and effectiveness of resources.

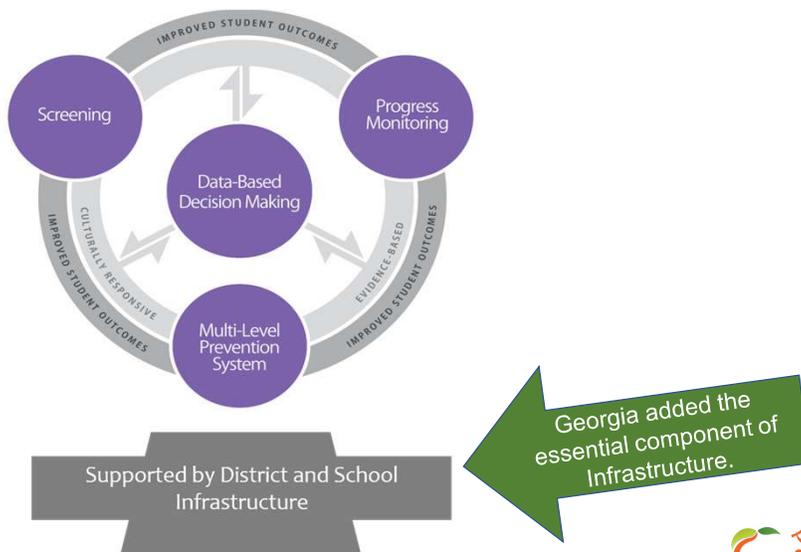
Adopted from the National Center on Response to Intervention (NCRTI), 2010

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## Essential Components of the Nationally Aligned MTSS Framework



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## What's the big deal about a multi-tiered system of supports (MTSS)?

### 1.29 Effect Size

Really Large Effect Size!

### Improved Outcomes

- Decreased expulsion, behavioral referrals, and suspension rates
- Sustained academic improvement
- Increased on-time graduation

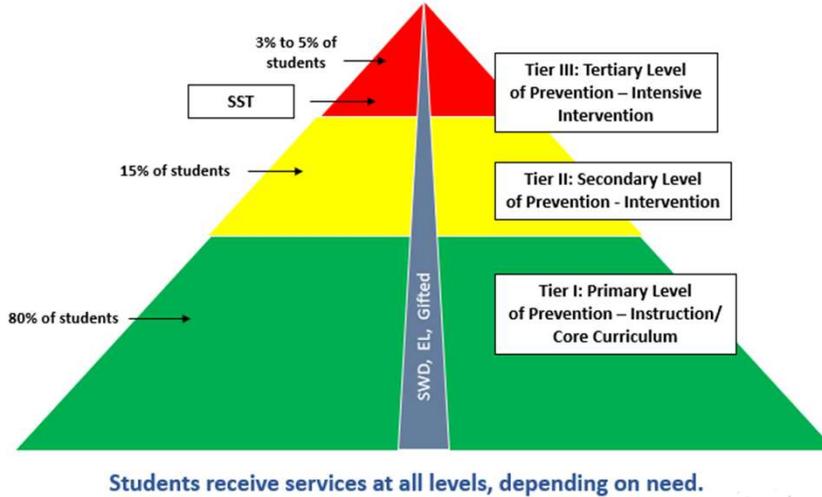
### Strong positive effects on system outcomes

- Increased instructional and planning time
- More efficient use of resources and staff
- Decreased inappropriate special education referrals and placement rates
- Reduction in amount of time student receives special education services
- Reduction in student grade retention

Burns, Appleton, & Stehouwer, 2005; Dexter, Hughes, & Farmer, 2008; Simmons, Coyne, Kwok, McDonagh, Harn, & Kame'enui, 2008; Hattie, 2018

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# Georgia's Multi-Level Prevention System

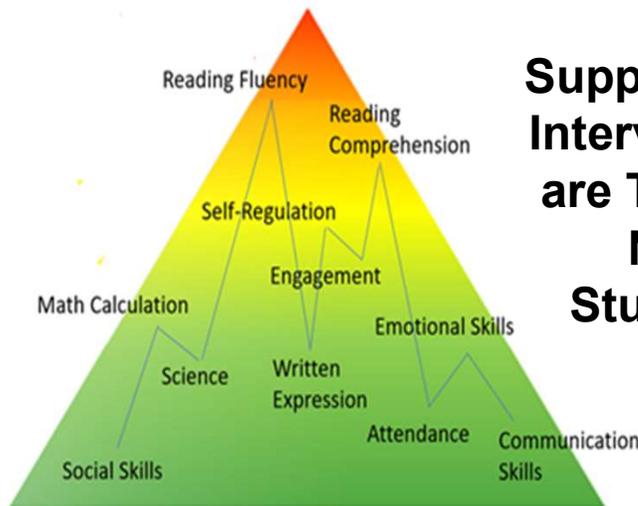


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## Supports and Interventions are Tiered— NOT Students.



Students receive services at all levels, depending on need.

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# Building a Robust Multi-Tiered System of Supports

## Tier I: Primary Level of Prevention



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## What is Tier I: Primary Level Prevention?

- The education system **designed** to meet the **diverse needs** of its **learners**.
- Includes the 'what' and 'how'.
- Includes everything that is NOT "intervention".
- For example:
  - Core academic and behavior curriculum and instruction
  - Schedule
  - Teacher-to-Student interaction
  - School culture
  - Standards
  - State and district requirements
  - Technology and resources

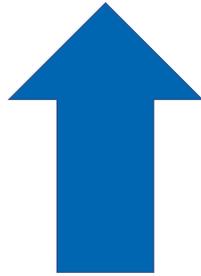
Tessie Rose Bailey, AIR, August 2019

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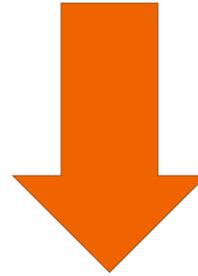


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## Impact of Poor Quality Tier I



Increase in number of students in intervention



Decrease in impact of interventions and instruction

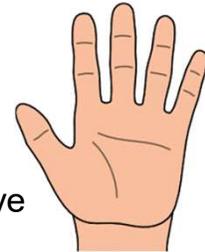
Fuchs & Fuchs, 2017

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## Indicators of Tier I Concerns: How Many Do You See?



- Less than 75-80% of students are identified as at or above grade level expectation or identified measures.
- Inconsistent performance across classrooms, grades, or schools.
- Poor attendance, low student engagement, and/or frequent behavior problems.
- High rates of students (>20%) identified for supplemental support.
- Differential benefit across subpopulations.
- Low teacher satisfaction or engagement.

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## Activity: What is Stopping You?

Activity  
#1

- **THINK:** Where do your Tier I data (i.e. state test, classroom, benchmarking) indicate that students are not performing as expected?
- **CREATE:** With your team/table, create a list of the things that are stopping you from improving Tier I student outcomes.
- **ORGANIZE:** With your team/table, organize your list into four categories: instruction, curriculum, environment, or learner.

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## Critical Features of Tier I

### Design

- Uses research-based curriculum materials
- Articulation of teaching and learning (in and across grade levels)
- Curriculum aligned with state standards
- Schedule

### Delivery

- Evidence-based and high-leverage practices
- Consistent use of differentiated instruction
- Inclusion of all students, including students with disabilities and those exceeding benchmark

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# Activity: Self-Evaluation of Tier I

- With your team/table, determine which descriptor best describes your school or district's Tier I System.



## Making Connections---Self-Evaluation of Tier I System

Directions: Read the descriptors in each column. With your team, determine which descriptor best describes your current Tier I system for each domain.

Tier I: Primary Level Prevention			
Research-Based Curriculum Materials	Few core curriculum materials are research based for the target population of learners (including subgroups).	Some core curriculum materials are research based for the target population of learners (including subgroups).	All core curriculum materials are research based for the target population of learners (including subgroups).
Articulation of Teaching and Learning (in and across grade levels)	Neither of the following conditions is met: (1) teaching and learning objectives are well articulated from one grade to another; and (2) teaching and learning is well articulated within grade levels so that students have highly similar experiences, regardless of their assigned teacher	Only one of the following conditions is met: (1) teaching and learning objectives are well articulated from one grade to another; and (2) teaching and learning is well articulated within grade levels so that students have highly similar experiences, regardless of their assigned teacher	Both of the following conditions are met: (1) teaching and learning objectives are well articulated from one grade to another; and (2) teaching and learning is well articulated within grade levels so that students have highly similar experiences, regardless of their assigned teacher
Differentiated Instruction	Neither of the following condition is met: (1) interviewed staff can describe how most teachers in the school differentiate instruction for students on, below, or above grade level; and (2) interviewed staff can explain how most teachers in the school use student data to identify and address the needs of students.	Only one of the following conditions is met: (1) interviewed staff can describe how most teachers in the school differentiate instruction for students on, below, or above grade level; and (2) interviewed staff can explain how most teachers in the school use student data to identify and address the needs of students.	Both of the following conditions are met: (1) interviewed staff can describe how most teachers in the school differentiate instruction for students on, below, or above grade level; and (2) interviewed staff can explain how most teachers in the school use student data to identify and address the needs of students.

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# High-Leverage Practices (HLPs)

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## High-Leverage Practices (HLPs)

- “A set of practices that are fundamental to support...student learning, and that can be taught, learned, and implemented by those entering the profession.”

(Windschitl, Thompson, Braaten, & Stroupe, 2012, p. 880)

- HLPs are HOW teachers deliver instruction. All teachers should have deep knowledge in a core set of effective instructional practices.

(McLeskey & Brownell, 2015)

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## High-Leverage Practices (HLPs):

Fundamental to effective teaching

Cut across content domains and grade levels

Used frequently

Supported by research

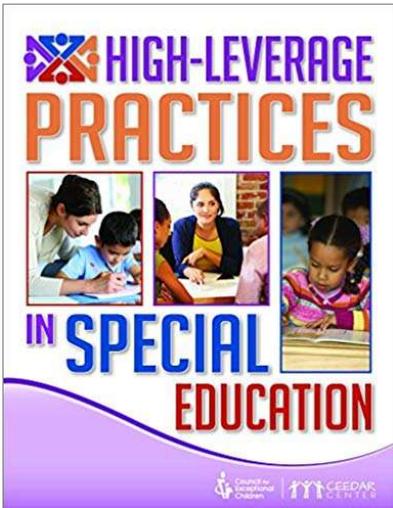
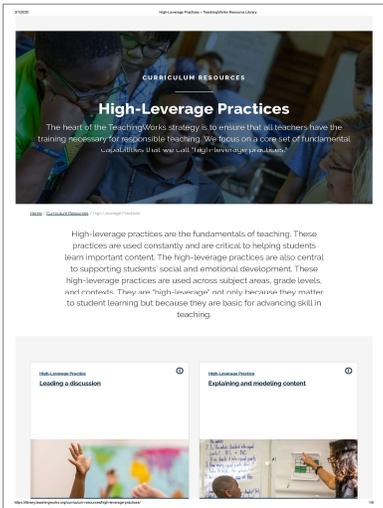
<http://www.teachingworks.org/work-of-teaching/high-leverage-practices>

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# High-Leverage Practices



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## Activity: Assessing Implementation of High-Leverage Practices

Read each descriptor and place an X in the column that best describes the extent to which teachers in your district/school consistently and effectively use these practices in the delivery of core instruction.

- 0 = not observed/very few
- 1 = some teachers
- 2 = most teachers

High Leverage Practice	Description	0	1	2
Leading a group discussion	In a group discussion, the teacher and all of the students work on specific content together, using one another's ideas as resources. The purposes of a discussion are to build collective knowledge and capability in relation to specific instructional goals and to allow students to practice listening, speaking, and interpreting. The teacher and a wide range of students contribute orally, listen actively, and respond to and learn from others' contributions.	X		
Explaining and modeling content, practices, and strategies	Explaining and modeling are practices for making a wide variety of content, academic practices, and strategies explicit to students. Depending on the topic and the instructional purpose, teachers might rely on simple verbal explanations, sometimes with accompanying examples or representations. In teaching more complex academic practices and strategies, such as an algorithm for carrying out a mathematical operation or the use of metacognition to improve reading comprehension, teachers might choose a more elaborate kind of explanation that we are calling "modeling." Modeling includes verbal explanation, but also thinking aloud and demonstrating.		X	
Eliciting and interpreting individual students' thinking	Teachers pose questions or tasks that provoke or allow students to share their thinking about specific academic content in order to evaluate student understanding, guide instructional decisions, and surface ideas that will benefit other students. To do this effectively, a teacher draws out a student's thinking through carefully-chosen questions and tasks and considers and checks alternative interpretations of the student's ideas and methods.		X	



# Evidence-Based Practices (EBPs)

## Selection of EBPs

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## Evidenced-Based Practices (EBPs):

Content Specific	Developmentally Appropriate
Learner Dependent	Supported by research

<http://www.teachingworks.org/work-of-teaching/high-leverage-practices>

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## Disclaimer

There is no single evidence-based practice that works for every student in every situation.

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## Resources for Selecting Evidence-Based Practices

### NCII Intervention Tools Chart

<http://www.intensiveintervention.org/chart/instructional-intervention-tools>

### What Works Clearinghouse

<http://ies.ed.gov/ncee/wwc/find/whatworks.aspx>

### Best Evidence Encyclopedia

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

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# What Works Clearinghouse (WWC) Practice Guides



**Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade**



**Teaching Secondary Students to Write Effectively**



**Teaching Elementary School Students to Be Effective Writers**



**Teaching Strategies for Improving Algebra Knowledge in Middle and High School Students**

See full list of Practice Guides at <https://ies.ed.gov/ncee/wwc/PracticeGuides>

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## Adolescent Literacy Evidence-Based Practices

#	Recommendations	Level of Evidence
1	Provide explicit vocabulary instruction.	Strong
2	Provide direct and explicit comprehension strategy instruction.	Strong
3	Provide opportunities for extended discussion of text meaning and interpretation.	Moderate
4	Increase student motivation and engagement in literacy learning.	Moderate
5	Make available intensive and individualized interventions for struggling readers that can be provided by trained specialists.	Strong

Kamil, Borman, Dole, et al., 2008

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## Middle to High Algebra Evidence-Based Practices

#	Recommendations	Level of Evidence
1	Use solved problems to engage students in analyzing algebraic reasoning and strategies. (Body of evidence suggests that, compared to asking students to solve practice problems alone, studying solved problems can improve achievement.)	Minimal
2	Teach students to utilize the structure of algebraic representations.	Minimal
3	Teach students to intentionally choose from alternative algebraic strategies when solving problems.	Moderate

Star, Caronongan, Foegen, et al., January 2019, revised

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## Early Elementary Literacy Evidence-Based Practices

#	Recommendations	Level of Evidence
1	Teach students academic language skills, including the use of inferential and narrative language, and vocabulary knowledge.	Minimal
2	Develop awareness of the segments of sounds in speech and how they link to letters.	Strong
3	Teach students to decode words, analyze word parts, and write and recognize words	Strong
4	Ensure that each student reads connected text every day to support reading accuracy, fluency, and comprehension.	Moderate

Foorman, Beyler, Borradaile, et al., 2016

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## 4th-8th Math Instructional Evidence-Based Practices

#	Recommendations	Level of Evidence
1	Prepare problems and use them in whole-class instruction	Minimal
2	Assist students in monitoring and reflecting on the problem-solving process.	Strong
3	Teach students how to use visual representations.	Strong
4	Expose students to multiple problem-solving strategies.	Moderate
5	Help students recognize and articulate mathematical concepts and notation.	Moderate

Woodward, Beckmann, Driscoll, et al., 2018

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## Middle to High Algebra Evidence-Based Practices

#	Recommendations	Level of Evidence
1	Use solved problems to engage students in analyzing algebraic reasoning and strategies. (Body of evidence suggests that, compared to asking students to solve practice problems alone, studying solved problems can improve achievement.)	Minimal
2	Teach students to utilize the structure of algebraic representations.	Minimal
3	Teach students to intentionally choose from alternative algebraic strategies when solving problems.	Moderate

Star, Foegen, Larson, et al., 2019

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## What if?

What if there is no WWC Practice Guide?

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## When Selecting Tier I EBPs

<b>Feasibility</b>	Cost, specialized training, or complexity are feasible within current context.
<b>Acceptability</b>	Acceptable for impacted stakeholders, including teachers, leaders, and families.
<b>Impact</b>	Evidence that it produces positive results on desired outcomes, strength of the effect, and amount of evidence.
<b>Relevance</b>	Research demonstrates impact in similar setting and with children with similar characteristics (age/grade, cultural, needs, socioeconomic).

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## Hexagon Discussion and Analysis Tool



- Assess new or existing innovations (programs, practices, curriculum, strategies, initiatives, etc.) that will be implemented:
  - Strength of Evidence
  - Supports for Implementation
  - Usability Across a Range of Contexts
- Assess the extent to which a new or existing innovation is a match for the organization
  - Population Need
  - Fit with Current Initiatives
  - Capacity to Implement

National Implementation Research Network,  
University of North Carolina at Chapel Hill, 2019

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## What should I do if Tier I EBPs aren't working...for most students?

- Ensure implementation fidelity
- Ensure a match between the curriculum and instruction and student needs
- Ensure staff are adequately trained to deliver the instruction
- Change the instruction, curriculum, or environment
- Select a new approach

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# Select Influences with High Effect Size

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## Effect Size

Rank ↕	Influence	Effect size d (Dec 2017) ↕	Effect size d (Aug 2017) ↕	Subdomain	Domain ↕
1	Collective teacher efficacy	1.57	1.57	Leadership	SCHOOL
2	Self-reported grades	1.33	1.33	Prior knowledge and background	STUDENT
3	Teacher estimates of achievement	1.29	1.62	Teacher attributes	TEACHER
4	Cognitive task analysis	1.29	1.29	Strategies emphasizing learning intentions	TEACHING: Focus on teaching/instructional strategies
5	Response to intervention	1.29	1.29	Strategies emphasizing feedback	TEACHING: Focus on teaching/instructional strategies

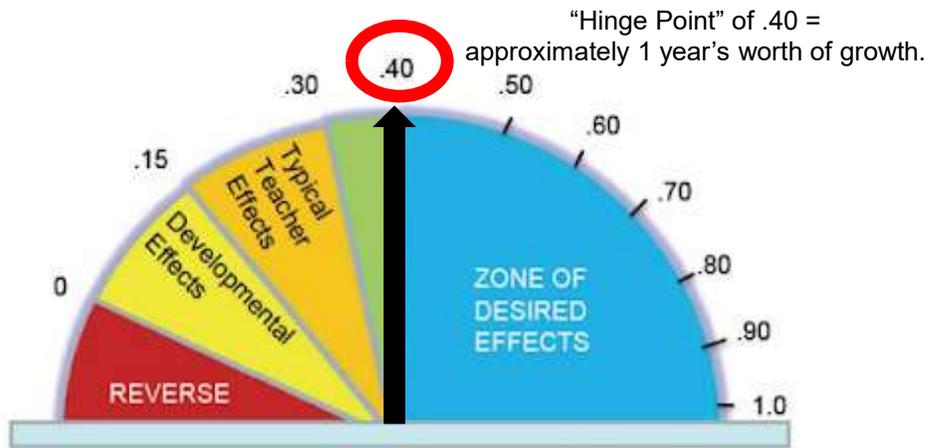
<https://visible-learning.org/hattie-ranking-influences-effect-sizes-learning-achievement/>

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# Hattie's Barometer of Influence



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# Infrastructure

## Effective Teaming



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## Georgia's Tiered System of Supports for Students



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## Essential Component: Infrastructure

*Knowledge, resources, and organizational structures necessary to operationalize all components of the framework in a unified system to meet the established goals.*

- Prevention Focus
- Leadership
- Professional Learning
- Schedules
- Resources
- Family and Community Engagement
- Communication with and Involvement of All Staff
- Effective Teaming
- Cultural Linguistic Responsiveness

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# Effective Teaming

- Active Implementation Frameworks
  - Usable Innovations
  - Implementation Stages
  - Implementation Drivers
  - **Implementation Teams**
  - Improvement Cycles

National Implementation Research Network, University of NC at Chapel Hill

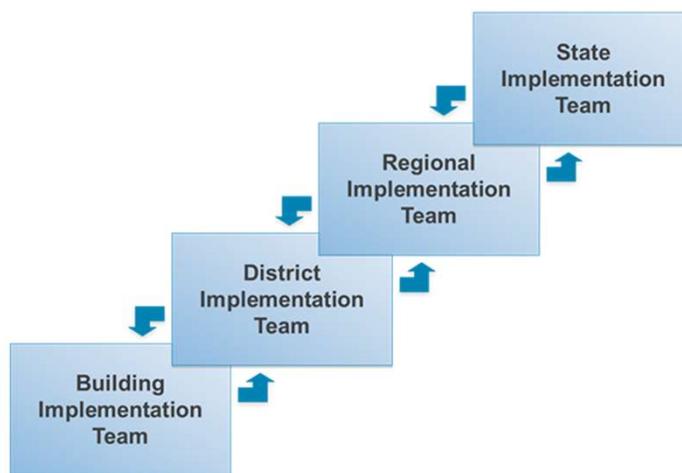
<https://nirn.fpg.unc.edu/national-implementation-research-network>

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# Implementation Teams



SISEP

Fixsen, Blase, Timbers, & Wolf, 2001; Balas & Boren, 2000; Green & Seifert, 2005



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# Implementation Teams

- **Letting “it” happen**
  - Effective practices occur without support
- **Helping “it” happen**
  - Interested agencies figure it out on their own
- **Making “it” happen**
  - Active use of strategies to support the adoption of the practices
  - Active installation of supports for use of the practices
  - Implementation teams are accountable for change and progress

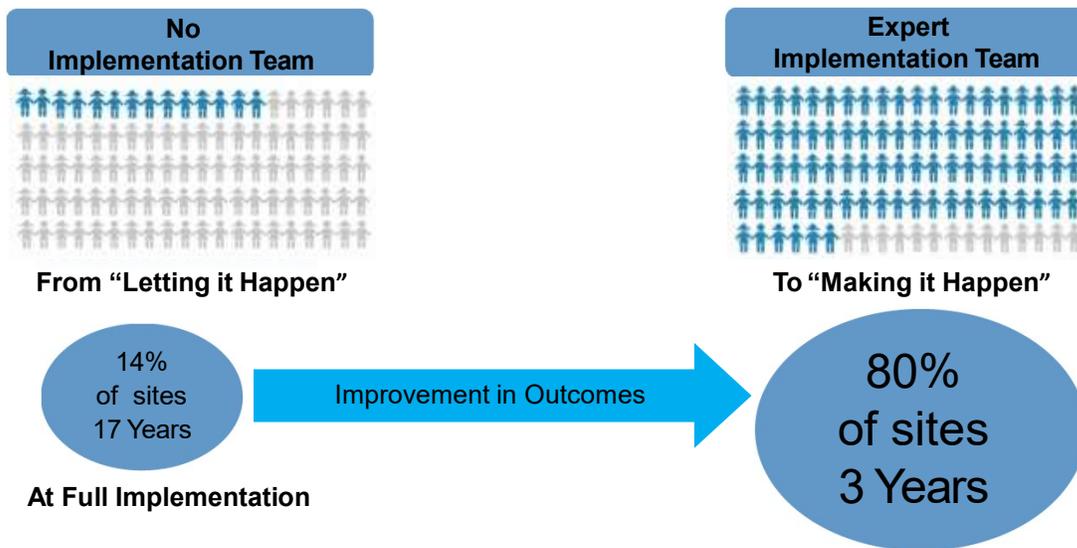
Based on Hall & Hord (1987); Greenhalgh, Robert, MacFarlane, Bate, & Kyriakidou (2004); Fixsen, Blase, Duda, Naoom, & Van Dyke (2010)

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## Why an Implementation Team?



SISEP

Fixsen, Blase, Timbers, & Wolf, 2001; Balas & Boren, 2000; Green & Seifert, 2005; Saldana & Chamberlain, 2012



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## Implementation Teams Focus On:

- Buy-in and readiness
- Installing and sustaining the implementation infrastructure
- Assessing and reporting on fidelity and outcomes
- Building linkages with external systems
- Problem-solving and promoting sustainability

National Implementation Research Network, University of NC at Chapel Hill  
<https://nirn.fpg.unc.edu/module-1/implementation-teams>

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## Fidelity of Implementation

What dimensions of fidelity are essential for maximizing effect of HLPs and EBPs at Tier I?



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## What Is Fidelity?

- Degree to which the program is implemented the way it was intended.

### **What happens if you adapt a published program?**

- Fidelity refers to the extent to which you implement the adaptation as designed.
- Maintain fidelity to the EBPs and HLPs.

Gersten et al., 2005; Mellard & Johnson, 2007; Sanetti & Kratochwill, 2009

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## Why Is Fidelity Important?

- Ensures that instruction has been implemented as intended.
- Allows us to link student outcomes to instruction.
- Helps in the determination of intervention effectiveness and instructional decision-making.
- Positive student outcomes depend on level of fidelity of intervention implementation.

Pierangelo & Giuliani, 2008

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# Five Elements of Fidelity

**Student Engagement:** How engaged and involved are the students in this intervention or activity?

**Program specificity:** How well is the intervention defined and different from other interventions?



**Adherence:** How well do we stick to the plan, curriculum, or assessment?

**Exposure/Duration:** How often does a student receive an intervention? How long does an intervention last?

**Quality of Delivery:** How well is the intervention, assessment, or instruction delivered? Do you use good teaching practices?

Dane & Schneider, 1998; Gresham et al., 1993; O'Donnell, 2008

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## Activity: Five Elements of Fidelity



Complete the last two columns, individually or with your team.

Five Elements of Fidelity

Element	Considerations	What would this look like in Tier 1? Examples in action.	How will I know it is happening? Possible data sources.
Student Engagement	How engaged and involved are the students in this intervention or activity?		
Program Specificity	How well is the intervention defined and different from other interventions?		
Adherence	How well do we stick to the plan, curriculum, or assessment?		
Exposure/Duration	How often does a student receive an intervention? How long does an intervention last?		

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## Monitoring Fidelity of Implementation – Data Source Examples

Element	Data Source Examples
Student Engagement	Student progress, student survey
Program Specificity	Intervention component checklist
Adherence	Self-report, observation checklist
Exposure/Duration	Self-report, observation
Quality of Delivery	Observation, reflection, self-report on techniques used

Dane & Schneider, 1998; Mellard & Johnson, 2008; O'Donnell, 2008

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## Reflection and Next Steps



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## Reflection on Tier I: Primary Prevention



1. What are our strengths or assets?
2. Where are potential areas of improvement or refinement for the upcoming school year?
3. What are our next steps?

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## Wrap-up and Session Feedback



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## Were Session Goals Met?

- Can you articulate the essential components of Georgia's Tiered System of Supports for Students?
- Can you explain how HLPs and EBPs can be used together to build a robust Tier I Primary Level of Prevention?
- Do you have practical tools and resources to assist with the selection, evaluation, and implementation of Tier I Primary Level of Prevention?
- Have you had an opportunity to reflect on Tier I and identify next steps to strengthen or refine your current Tier I Primary Level of Prevention?

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## Session Feedback

Thank you for attending our session.  
Please take a moment to provide  
your feedback.

<https://tinyurl.com/2020ILC>



Share your conference highlights now!



[@GaDOESDE](https://twitter.com/GaDOESDE)

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## Resources to Support Identification of HLPs and EBPs at Tier I

- What Works Clearinghouse: What works Clearinghouse is a central source of scientific evidence for what works in education <https://ies.ed.gov/ncee/wwc/>
- IES Practice Guides: Institute of Education Sciences (IES) Practice Guides are subjected to rigorous external peer review and consist of recommendations, strategies, and indications of the strength of evidence supporting each recommendation <https://eric.ed.gov/>
- Best Evidence Encyclopedia: Best Evidence Encyclopedia offers information to improve learning for students in grades K-12 and particularly targets students in mathematics, special needs/diverse learners, and English language learners <http://www.bestevidence.org/?ad=6>
- IRIS Center: [http://iris.peabody.vanderbilt.edu/ebp\\_summaries/](http://iris.peabody.vanderbilt.edu/ebp_summaries/)
- Teaching Works: High-Leverage Practices (Ball): <http://www.teachingworks.org/work-of-teaching/high-leverage-practices>
- CEEDAR Center: <http://cedar.education.ufl.edu/>
- Evidence-based Intervention Network: <http://ebi.missouri.edu/>
- High-Leverage Practices in Special Education: <http://cedar.education.ufl.edu/wp-content/uploads/2017/07/CEC-HLP-Web.pdf>

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## Georgia's Tiered System of Supports for Students

### Atlanta Office

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# Georgia's Tiered System of Supports for Students

## Field Team

Laura Brown,  
Coordinator for Coaching Services

Christy Jones,  
Regional Coach

Launa Chamberlin,  
Regional Coach

Claire Smith,  
Regional Coach

Jody Drum,  
Regional Coach

Deshonda Stringer,  
Regional Coach

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## Need More Information?

Georgia's Tiered System of Supports for Students

[www.gadoe.org/TieredSystemofSupports](http://www.gadoe.org/TieredSystemofSupports)

or

[www.gadoe.org/MTSS](http://www.gadoe.org/MTSS)

**Apply for Cohort 3**

**Apply for Georgia's Online MTSS/SST**

**Register for Upcoming Events**

**Subscribe to Newsletter**

**Access Resources**

- Fact Sheets: Simplify essential components/framework
- Professional Learning Units
- Directions to Access Online Modules in SLDS
- Training Webinars

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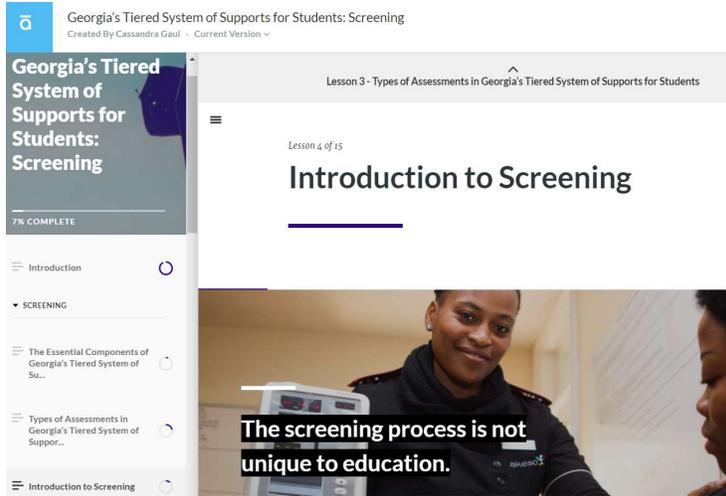


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# MTSS Online Courses

The MTSS Overview and Screening online modules are available in SLDS!

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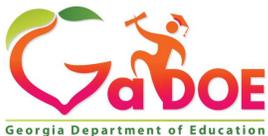
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## Activity: What Is Stopping You?

**THINK:** Where do your Tier I data (i.e. state test, classroom, benchmarking) indicate that students are not performing as expected?

**CREATE:** With your team/table, create a list of the things that are stopping you from improving Tier I student outcomes.

**Organize:** With your team/table, organize your list into four categories: instruction, curriculum, environment or learner.

<p><b>Instruction:</b> How curriculum is taught and presented.</p> <p>EX., techniques, style, feedback, level of instruction, quality and presentation of instruction, grouping, vocabulary</p>	<p><b>Curriculum:</b> Refers to what is taught.</p> <p>EX., scope and sequence, pacing within and between topics, difficulty, materials, relevance</p>
<p><b>Environment:</b> Classroom/school/peer = where instruction occurs. Family/ community = outside classroom environment.</p> <p>EX., attendance, expectations, behavior, classroom management, relationships, schedule</p>	<p><b>Learner:</b> who is being taught</p> <p>EX., motivation, prerequisite skills, organization/study habits, abilities, impairments, and history of instruction</p>



## Making Connections---Self-Evaluation of Tier I System

**Directions:** Read the descriptors in each column. With your team, determine which descriptor best describes your current Tier I system for each domain.

<b>Tier I: Primary Level Prevention</b>			
<b>Research-Based Curriculum Materials</b>	Few core curriculum materials are research based for the target population of learners (including subgroups).	Some core curriculum materials are research based for the target population of learners (including subgroups).	All core curriculum materials are research based for the target population of learners (including subgroups).
<b>Articulation of Teaching and Learning (in and across grade levels)</b>	Neither of the following conditions is met: (1) teaching and learning objectives are well articulated from one grade to another; and (2) teaching and learning is well articulated within grade levels so that students have highly similar experiences, regardless of their assigned teacher.	Only one of the following conditions is met: (1) teaching and learning objectives are well articulated from one grade to another; and (2) teaching and learning is well articulated within grade levels so that students have highly similar experiences, regardless of their assigned teacher.	Both of the following conditions are met: (1) teaching and learning objectives are well articulated from one grade to another; and (2) teaching and learning is well articulated within grade levels so that students have highly similar experiences, regardless of their assigned teacher.
<b>Differentiated Instruction</b>	Neither of the following condition is met: (1) interviewed staff can describe how most teachers in the school differentiate instruction for students on, below, or above grade level; and (2) interviewed staff can explain how most teachers in the school use student data to identify and address the needs of students.	Only one of the following conditions is met: (1) interviewed staff can describe how most teachers in the school differentiate instruction for students on, below, or above grade level; and (2) interviewed staff can explain how most teachers in the school use student data to identify and address the needs of students.	Both of the following conditions are met: (1) interviewed staff can describe how most teachers in the school differentiate instruction for students on, below, or above grade level; and (2) interviewed staff can explain how most teachers in the school use student data to identify and address the needs of students.

<b>Standards-Based</b>	The core curriculum (e.g., academics, behavior, social-emotional) is not aligned with the state standards.	The core curriculum (e.g., academics, behavior, social-emotional) is partially aligned with the state standards.	The core curriculum (e.g., academics, behavior, social-emotional) is aligned with the state standards.
<b>Exceeding Benchmark</b>	Neither of the following conditions is met: (1) the school provides enrichment opportunities for students exceeding benchmarks; and (2) teachers implement those opportunities consistently at all grade levels.	One of the following conditions is met: (1) the school provides enrichment opportunities for students exceeding benchmarks; and (2) teachers implement those opportunities consistently at all grade levels.	Both of the following conditions are met: (1) the school provides enrichment opportunities for students exceeding benchmarks; and (2) teachers implement those opportunities consistently at all grade levels.
<b>Below Benchmark</b>	Neither of the following conditions is met: (1) the school provides appropriate supports (i.e., instructional technology, accommodations, modifications) for students below grade level to access core instruction; and (2) teachers implement those opportunities consistently at all grade levels.	One of the following conditions is met: (1) the school provides appropriate supports (i.e., instructional technology, accommodations, modifications) for students below grade level to access core instruction; and (2) teachers implement those opportunities consistently at all grade levels.	Both of the following conditions are met: (1) the school provides appropriate supports (i.e., instructional technology, accommodations, modifications) for students below grade level to access core instruction; and (2) teachers implement those opportunities consistently at all grade levels.
<b>Schedule</b>	The schedule does not provide sufficient time for core planning and programming instruction or it's left up to individual staff members to ensure that planned time is utilized for core instruction.	The schedule provides sufficient time for core instruction but it is not protected from controllable interruptions nor monitored to ensure that planned time is utilized for core instruction.	The schedule provides sufficient time for core planning and delivery, is protected from all controllable interruptions, and is monitored to ensure that planned time is utilized for core instruction.

## **Reflection on Tier I: Primary Prevention**

1. What are our strengths or assets?
2. What are potential areas of improvement or refinement for the upcoming school year?
3. What are our next steps?



## Assessing Implementation of the Tier 1 Instructional Practices

“These high-leverage practices are used across subject areas, grade levels, and contexts. They are ‘high-leverage’ not only because they matter to student learning but because they are basic for advancing skill in teaching ([www.TeachingWorks.org](http://www.TeachingWorks.org)).” To what extent are these practices used consistently across teachers and domains within your school? With your team, read each descriptor and place an X in the column that best describes the extent to which teachers in your school/district consistently and effectively use these practices in the delivery core instruction (0 = not observed/very few, 1 = some teachers, 2 = most teachers).

High Leverage Practice	Description	0	1	2
<b>Leading a group discussion</b>	In a group discussion, the teacher and all of the students work on specific content together, using one another’s ideas as resources. The purposes of a discussion are to build collective knowledge and capability in relation to specific instructional goals and to allow students to practice listening, speaking, and interpreting. The teacher and a wide range of students contribute orally, listen actively, and respond to and learn from others’ contributions.			
<b>Explaining and modeling content, practices, and strategies</b>	Explaining and modeling are practices for making a wide variety of content, academic practices, and strategies explicit to students. Depending on the topic and the instructional purpose, teachers might rely on simple verbal explanations, sometimes with accompanying examples or representations. In teaching more complex academic practices and strategies, such as an algorithm for carrying out a mathematical operation or the use of metacognition to improve reading comprehension, teachers might choose a more elaborate kind of explanation that we are calling “modeling.” Modeling includes verbal explanation, but also thinking aloud and demonstrating			
<b>Eliciting and interpreting individual students’ thinking</b>	Teachers pose questions or tasks that provoke or allow students to share their thinking about specific academic content in order to evaluate student understanding, guide instructional decisions, and surface ideas that will benefit other students. To do this effectively, a teacher draws out a student’s thinking through carefully-chosen questions and tasks and considers and checks alternative interpretations of the student’s ideas and methods.			
<b>Diagnosing particular common patterns of student thinking and development in a subject-matter domain</b>	Although there are important individual and cultural differences among students, there are also common patterns in the ways in which students think about and develop understanding and skill in relation to particular topics and problems. Teachers who are familiar with common patterns of student thinking and development and who are fluent in anticipating or identifying them are able to work more effectively and efficiently as they plan and implement instruction and evaluate student learning.			

<p><b>Implementing norms and routines for classroom discourse and work</b></p>	<p>Each discipline has norms and routines that reflect the ways in which people in the field construct and share knowledge. These norms and routines vary across subjects but often include establishing hypotheses, providing evidence for claims, and showing one’s thinking in detail. Teaching students what they are, why they are important, and how to use them is crucial to building understanding and capability in a given subject. Teachers may use explicit explanation, modeling, and repeated practice to do this.</p>			
<p><b>Coordinating and adjusting instruction during a lesson</b></p>	<p>Teachers must take care to coordinate and adjust instruction during a lesson in order to maintain coherence, ensure that the lesson is responsive to students’ needs, and use time efficiently. This includes explicitly connecting parts of the lesson, managing transitions carefully, and making changes to the plan in response to student progress.</p>			
<p><b>Specifying and reinforcing productive student behavior</b></p>	<p>Clear expectations for student behavior and careful work on the teacher’s part to teach productive behavior to students, reward it, and strategically redirect off-task behavior help create classrooms that are productive learning environments for all. This practice includes not only skills for laying out classroom rules and managing truly disruptive behavior, but for recognizing the many ways that children might act when they actually are engaged and for teaching students how to interact with each other and the teacher while in class.</p>			
<p><b>Implementing organizational routines</b></p>	<p>Teachers implement routine ways of carrying out classroom tasks in order to maximize the time available for learning and minimize disruptions and distractions. They organize time, space, materials, and students strategically and deliberately teach students how to complete tasks such as lining up at the door, passing out papers, and asking to participate in class discussion. This can include demonstrating and rehearsing routines and maintaining them consistently.</p>			
<p><b>Setting up and managing small group work</b></p>	<p>Teachers use small group work when instructional goals call for in-depth interaction among students and in order to teach students to work collaboratively. To use groups effectively, teachers choose tasks that require and foster collaborative work, issue clear directions that permit groups to work semi-independently, and implement mechanisms for holding students accountable for both collective and individual learning. They use their own time strategically, deliberately choosing which groups to work with, when, and on what.</p>			
<p><b>Building respectful relationships with students</b></p>	<p>Teachers increase the likelihood that students will engage and persist in school when they establish positive, individual relationships with them. Techniques for doing this include greeting students positively every day, having frequent, brief, “check in” conversations with students to demonstrate care and interest, and following up with students who are experiencing difficult or special personal situations.</p>			
<p><b>Talking about a student with parents or other caregivers</b></p>	<p>Regular communication between teachers and parents/guardians supports student learning. Teachers communicate with parents to provide information about students’ academic progress, behavior, or development; to seek information and help; and to request parental involvement in school. These communications may take place in person, in writing, or over the phone. Productive communications are attentive to considerations of language and culture and designed to support parents and guardians in fostering their child’s success in and out of school.</p>			

<p><b>Learning about students’ cultural, religious, family, intellectual, and personal experiences and resources for use in instruction</b></p>	<p>Teachers must actively learn about their particular students in order to design instruction that will meet their needs. This includes being deliberate about trying to understand the cultural norms for communicating and collaborating that prevail in particular communities, how certain cultural and religious views affect what is considered appropriate in school, and the topics and issues that interest individual students and groups of students. It also means keeping track of what is happening in students’ personal lives so as to be able to respond appropriately when an out-of-school experience affects what is happening in school.</p>			
<p><b>Setting long- and short-term learning goals for students</b></p>	<p>Clear goals referenced to external standards help teachers ensure that all students learn expected content. Explicit goals help teachers to maintain coherent, purposeful, and equitable instruction over time. Setting effective goals involves analysis of student knowledge and skills in relation to established standards and careful efforts to establish and sequence interim benchmarks that will help ensure steady progress toward larger goals.</p>			
<p><b>Designing single lessons and sequences of lessons</b></p>	<p>Carefully-sequenced lessons help students develop deep understanding of content and sophisticated skills and practices. Teachers design and sequence lessons with an eye toward providing opportunities for student inquiry and discovery and include opportunities for students to practice and master foundational concepts and skills before moving on to more advanced ones. Effectively-sequenced lessons maintain a coherent focus while keeping students engaged; they also help students achieve appreciation of what they have learned.</p>			
<p><b>Checking student understanding during and at the conclusion of lessons</b></p>	<p>Teachers use a variety of informal but deliberate methods to assess what students are learning during and between lessons. These frequent checks provide information about students’ current level of competence and help the teacher adjust instruction during a single lesson or from one lesson to the next. They may include, for example, simple questioning, short performance tasks, or journal or notebook entries.</p>			
<p><b>Selecting and designing formal assessments of student learning</b></p>	<p>Effective summative assessments provide teachers with rich information about what students have learned and where they are struggling in relation to specific learning goals. In composing and selecting assessments, teachers consider validity, fairness, and efficiency. Effective summative assessments provide both students and teachers with useful information and help teachers evaluate and design further instruction.</p>			
<p><b>Interpreting the results of student work, including routine assignments, quizzes, tests, projects, and standardized assessments</b></p>	<p>Student work is the most important source of information about the effectiveness of instruction. Teachers must analyze student productions, including assessments of all kinds, looking for patterns that will guide their efforts to assist specific students and the class as a whole and inform future instruction.</p>			
<p><b>Providing oral and written feedback to students</b></p>	<p>Effective feedback helps focus students’ attention on specific qualities of their work; it highlights areas needing improvement; and delineates ways to improve. Good feedback is specific, not overwhelming in scope, and focused on the academic task, and supports students’ perceptions of their own capability. Giving skillful feedback requires the teacher to make strategic choices about the frequency, method, and content of feedback and to communicate in ways that are understandable by students.</p>			





## Five Elements of Fidelity

Element	Considerations	What would this look like in Tier 1? Examples in action.	How will I know it is happening? Possible data sources.
Student Engagement	How engaged and involved are the students in this intervention or activity?		
Program Specificity	How well is the intervention defined and different from other interventions?		
Adherence	How well do we stick to the plan, curriculum, or assessment?		
Exposure/Duration	How often does a student receive an intervention? How long does an intervention last?		
Quality of Delivery	How well is the intervention, assessment, or instruction delivered? Do you deliver instruction using high leverage practices?		



## High-Leverage Practices Crosswalk

This document shows points of alignment between the following three important documents: [High-Leverage Practices](#), [High-Leverage Practices in Special Education](#), and [Promoting Principal Leadership for the Success of Students With Disabilities](#).

High-Leverage Practices	High-Leverage Practices in Special Education	Related Professional Standards for Educational Leaders <i>Promoting Principal Leadership for the Success of Students With Disabilities</i>
1) Leading a group discussion	Teach social behaviors (9)	Promote instructional practice that is consistent with knowledge of child learning and development, effective pedagogy, and the needs of each student (4c)  <i>Ensure that evidence-based approaches to instruction and assessment are implemented with integrity and are adapted to local needs</i>
	Teach cognitive and metacognitive strategies to support learning and independence (14)	
	Use strategies to promote active student engagement (18)	
2) Explaining and modeling content, practices, and strategies	Teach cognitive and metacognitive strategies to support learning and independence (14)	Promote instructional practice that is consistent with knowledge of child learning and development, effective pedagogy, and the needs of each student (4c)  <i>Ensure that evidence-based approaches to instruction and assessment are implemented with integrity and are adapted to local needs</i>
	Teach social behaviors (9)	
	Use explicit instruction (16)	
	Provide intensive instruction (20)	
	Teach students to maintain and generalize new learning across time and settings (21)	
3) Eliciting and interpreting individual	Use strategies to promote active student	Promote instructional practice that is

students' thinking	engagement (18)	<p>consistent with knowledge of child learning and development, effective pedagogy, and the needs of each student (4c)</p> <p><i>Ensure that evidence-based approaches to instruction and assessment are implemented with integrity and are adapted to local needs</i></p>
	Provide positive and constructive feedback to guide students' learning and behavior (22)	
4) Diagnosing particular common patterns of student thinking and development in a subject-matter domain	Systematically design instruction toward a specific learning goal (12)	<p>Ensure instructional practice that is intellectually challenging, is authentic to student experiences, recognizes student strengths, and is differentiated and personalized (4d)</p> <p><i>Ensure that evidence-based approaches to instruction and assessment are implemented with integrity and are adapted to local needs</i></p>
	Adapt curriculum tasks and materials for specific learning goals (13)	
5) Implementing norms and routines for classroom discourse and work	Establish a consistent, organized, and respectful learning environment (7)	<p>Promote instructional practice that is consistent with knowledge of child learning and development, effective pedagogy, and the needs of each student (4c)</p> <p>Cultivate and reinforce student engagement in school and positive student conduct (5e)</p> <p><i>Ensure that students with disabilities (SWD) have opportunities to learn with their non-disabled peers to the greatest extent possible</i></p>
	Teach social behaviors (9)	

		<p><i>Support teachers as they create productive and inclusive environments in their classrooms and throughout the school</i></p>
6) Coordinating and adjusting instruction during a lesson	Provide scaffolded supports (15)	<p>Ensure instructional practice that is intellectually challenging, is authentic to student experiences, recognizes student strengths, and is differentiated and personalized (4d)</p> <p><i>Ensure that evidence-based approaches to instruction and assessment are implemented with integrity and are adapted to local needs</i></p>
7) Specifying and reinforcing productive student behavior	Provide positive and constructive feedback to guide students' learning and behavior (8)	Develop student policies and address student misconduct in a positive, fair, and unbiased manner (3d)
	Conduct functional behavioral assessments to develop individual student behavior support plans (10)	<p>Cultivate and reinforce student engagement in school and positive student conduct (5e)</p> <p><i>Promote inclusive social environments that foster acceptance, care, and sense of value and belonging in adult-student and student-peer relationships</i></p>
8) Implementing organizational routines	Establish a consistent, organized, and respectful learning environment (7)	Promote instructional practice that is consistent with knowledge of child learning and development, effective pedagogy, and the needs of each student (4c)

		<i>Support teachers as they create productive and inclusive environments in their classrooms and throughout the school</i>
9) Setting up and managing small group work	Use flexible grouping (17)	Promote instructional practice that is consistent with knowledge of child learning and development, effective pedagogy, and the needs of each student (4c)  <i>Ensure that evidence-based approaches to instruction and assessment are implemented with integrity and are adapted to local needs</i>
	Use strategies to promote active student engagement (18)	
10) Building respectful relationships with students	Establish a consistent, organized, and respectful learning environment (7)	Create and sustain a school environment in which each student is known, accepted and valued, trusted and respected, cared for, and encouraged to be an active and responsible member of the school community (5b)  <i>Promote inclusive social environments that foster acceptance, care, and sense of value and belonging in adult-student and student-peer relationships</i>
	Teach social behaviors (9)	
11) Talking about a student with parents or other caregivers	Organize and facilitate effective meetings with professionals and families (2)	Create means for the school community to partner with families to support student learning in and out of school (8e)  <i>Create partnerships with families of SWD and engage them purposefully and productively in the learning and development of their children in and out of school</i>
	Collaborate with families to support student learning and secure needed services (3)	

<p>12) Learning about students' cultural, religious, family, intellectual, and personal experiences and resources for use in instruction</p>	<p>Collaborate with families to support student learning and secure needed services (3)</p> <p>Use multiple sources of information to develop a comprehensive understanding of a student's strengths and needs (4)</p>	<p>Recognize, respect, and employ each student's strengths, diversity, and culture as assets for teaching and learning (3b)</p> <p><i>Engage families to provide insight about their children's specific disabilities that allows teachers to better understand their needs, make educationally sound instructional decisions, and assist in interpreting and assessing student progress</i></p>
<p>13) Setting long- and short-term learning goals for students</p>	<p>Identify and prioritize long- and short-term learning goals (11)</p> <p>Use assistive and instructional technologies (19)</p>	<p>Promote instructional practice that is consistent with knowledge of child learning and development, effective pedagogy, and the needs of each student (4c)</p> <p><i>Communicate high academic expectations for all students, including SWD; promote high-quality, intellectually challenging curricula and instruction; and provide opportunities for students with disabilities to achieve within the general education curriculum using a multi-tiered system of support</i></p>
<p>14) Designing single lessons and sequences of lessons</p>	<p>Systematically design instruction toward a specific learning goal (12)</p>	<p>Ensure instructional practice that is intellectually challenging, is authentic to student experiences, recognizes student strengths, and is differentiated and personalized (4d)</p>

		<i>Ensure that evidence-based approaches to instruction and assessment are implemented with integrity and are adapted to local needs</i>
15) Checking student understanding during and at the conclusion of lessons	Use student assessment data, analyze instructional practices, and make necessary adjustments that improve student outcomes (6)	<p>Ensure instructional practice that is intellectually challenging, is authentic to student experiences, recognizes student strengths, and is differentiated and personalized (4d)</p> <p><i>Promote appropriate, clear, and valid monitoring and assessment systems in which teachers receive meaningful information about how students respond to instruction and information is relevant to instructional improvement</i></p>
16) Selecting and designing formal assessments of student learning	Use student assessment data, analyze instructional practices, and make necessary adjustments that improve student outcomes (6)	<p>Employ valid assessments that are consistent with knowledge of child learning and development and technical standards (4f)</p> <p><i>Promote appropriate, clear, and valid monitoring and assessment systems in which teachers receive meaningful information about how students respond to instruction and information is relevant to instructional improvement</i></p>
17) Interpreting the results of student work, including routine assignments,	Collaborate with professionals to increase student success (1)	Use assessment data appropriately and within technical limitations to monitor student

<p>quizzes, tests, projects, and standardized assessments</p>	<p>Use multiple sources of information to develop a comprehensive understanding of a student's strengths and needs (4)</p>	<p>progress and improve instruction (4g)  <i>Promote appropriate, clear, and valid monitoring and assessment systems in which teachers receive meaningful information about how students respond to instruction and information is relevant to instructional improvement</i></p>
	<p>Interpret and communicate assessment information with stakeholders to collaboratively design and implement educational programs (5)</p>	
<p>18) Providing oral and written feedback to students</p>	<p>Provide positive and constructive feedback to guide students' learning and behavior (8, 22)</p>	<p>Promote instructional practice that is consistent with knowledge of child learning and development, effective pedagogy, and the needs of each student (4c)   <i>Ensure that evidence-based approaches to instruction and assessment are implemented with integrity and are adapted to local needs</i></p>
<p>19) Analyzing instruction for the purpose of improving it</p>	<p>Use student assessment data, analyze instructional practices, and make necessary adjustments that improve student outcomes (6)</p>	<p>Use assessment data appropriately and within technical limitations to monitor student progress and improve instruction (4g)             Deliver actionable feedback about instruction and other professional practice through valid, research-anchored systems of supervision and evaluation to support the development of teachers' and staff members' knowledge, skills, and practice (6e)   <i>Promote appropriate, clear, and valid monitoring and assessment systems in which</i></p>

		<p><i>teachers receive meaningful information about how students respond to instruction and information is relevant to instructional improvement</i></p> <p><i>Work collaboratively with classroom teachers to help them develop their capacity for effective instruction</i></p>
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Resources:

Council of Chief State School Officers & CEEDAR Center. (2017). *PSEL 2015 and promoting principal leadership for the success of students with disabilities*. Washington, DC: Council of Chief State School Officers. Retrieved from: <http://cedar.education.ufl.edu/wp-content/uploads/2017/01/PSELforSWDs01252017.pdf>

McLeskey, J., Barringer, M-D., Billingsley, B., Brownell, M., Jackson, D., Kennedy, M., Lewis, T., Maheady, L., Rodriguez, J., Scheeler, M. C., Winn, J., & Ziegler, D. (2017, January). *High-leverage practices in special education*. Arlington, VA: Council for Exceptional Children & CEEDAR Center. Retrieved from: <http://cedar.education.ufl.edu/portfolio/ccsc-2017-high-leverage-practices/>

National Policy Board for Educational Administration. (2015). *Professional standards for educational leaders 2015*. Reston, VA: Author. Retrieved from: <http://www.ccsso.org/Documents/2015/ProfessionalStandardsforEducationalLeaders2015forNPBEAFINAL.pdf>

Teaching Works. (n.d.). *High leverage practices*. Retrieved from: <http://www.teachingworks.org/work-of-teaching/high-leverage-practices>



The Hexagon: An Exploration Tool  
Hexagon Discussion & Analysis Tool Instructions  
*Kentucky Department of Education Adaptation*



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Metz, A. & Louison, L. (2019) The Hexagon Tool: Exploring Context. Chapel Hill, NC: National Implementation Research Network, Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill. Based on Kiser, Zabel, Zachik, & Smith (2007) and Blase, Kiser & Van Dyke (2013).

## Hexagon Discussion & Analysis Tool Instructions

The Hexagon Discussion and Analysis Tool helps organizations evaluate new and existing innovations (programs, practices, curriculum, strategies, initiatives, etc.). This tool is designed to be used by a team to ensure diverse perspectives are represented in a discussion of the six contextual fit and feasibility factors.

### INNOVATION INDICATORS

Innovation indicators assess new or existing innovations that will be implemented along the following domains: evidence, supports, and usability. These indicators specify the extent to which the identified innovation demonstrates evidence, supports for implementation, and usability across a range of contexts.

### SYSTEM INDICATORS

System indicators assess the extent to which a new or existing innovation is a match for the organization along the following domains: population need, fit, and capacity. The assessment specifies suggested conditions and requirements for a strong match to need, fit, and capacity for the identified innovation.

### WHEN TO USE

The Hexagon Tool can be used at any stage (e.g., choosing a new innovation or strengthening one already in use) in an innovation's implementation to determine its fit with the local context (e.g., size of district, location [rural or urban], funding structure). It is most commonly used during the Exploration stage: the period when an organization is identifying possible new innovations to implement. This tool also helps to identify gaps in Initial Implementation when beginning to rethink the use of an innovation.

### HOW TO USE

#### PRIOR TO USING

1. Identify broadly the need to be addressed by potential innovation.
2. Identify the innovation to be assessed.
3. Identify a team with diverse perspectives and roles to participate in the discussion. Suggested team members include leaders, managers, direct practitioners and consumers or community members.
4. Review the discussion questions prior to meeting to ensure any data or resources that need to be reviewed for this discussion are available. If appropriate, an organization may prioritize components for deeper exploration based on the organization's context and innovations under analysis.

#### DURING USE

1. The team should review and discuss the questions for each indicator and document relevant considerations. The team may modify or add questions in the blank spaces provided when considering evidence for use of an innovation in a specific content area (e.g., math, literacy). Notes can be added in the available space to address unique needs and contexts.
2. The team should determine which Hexagon factor to begin with based on their local context.
3. After discussing each component, the team rates the component using the 5-point Likert scale in each section.
4. Using the discussion notes and ratings, the team makes recommendations about whether to adopt, replicate, or de-implement the innovation. While ratings should be taken into account during the decision-making process, the ratings alone should not be used to determine final recommendations.

# The Hexagon: An Exploration Tool

The Hexagon can be used as a planning tool to guide selection and evaluate potential innovations for use.

## IMPLEMENTATION INDICATORS

### SYSTEM INDICATORS

#### CAPACITY TO IMPLEMENT

- Staff meet minimum qualifications
- Able to sustain staffing, coaching, training, data systems, performance assessment, and administration
  - Financial capacity
  - Structural capacity
  - Cultural responsiveness capacity
- Buy-in process operationalized
  - Practitioners
  - Families

#### FIT WITH CURRENT INITIATIVES

- Alignment with community, regional, state priorities
- Fit with family and community values, culture and history
- Impact on other interventions & initiatives
- Alignment with organizational structure

#### NEED

- Target population identified
- Disaggregated data indicating population needs
- Parent & community perceptions of need
- Addresses service or system gaps

### INNOVATION INDICATORS

#### EVIDENCE

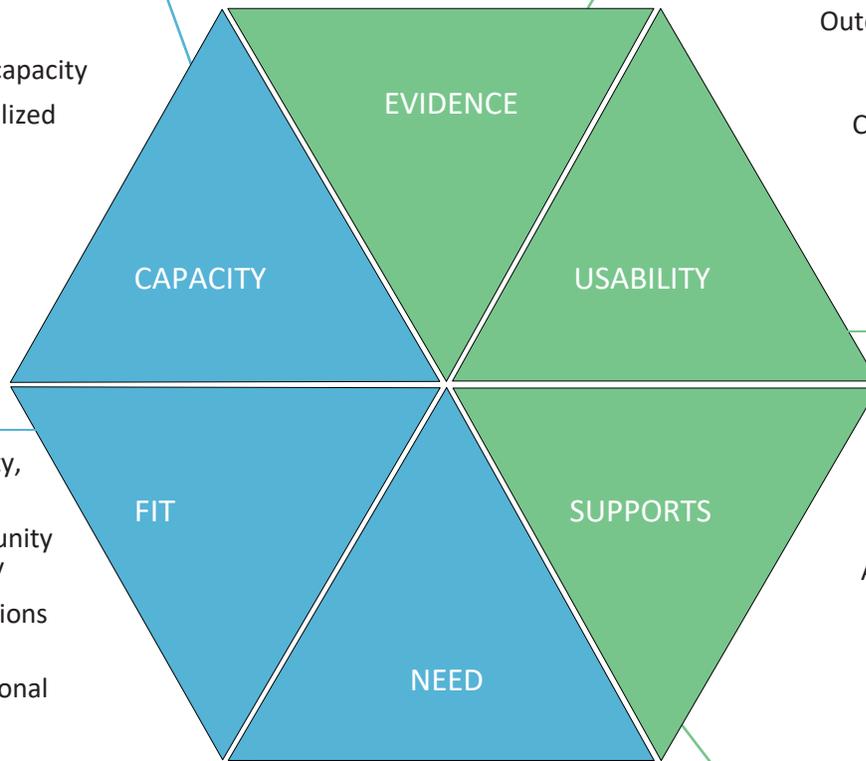
- Strength of evidence—for whom in what conditions:
  - Number of studies
  - Population similarities
  - Diverse cultural groups
  - Efficacy or Effectiveness
- Outcomes – Is it worth it?
  - Fidelity data
  - Cost-effectiveness data

#### USABILITY

- Well-defined innovation
- Mature examples to observe
- Several replications
- Adaptations for context

#### SUPPORTS

- Expert Assistance
- Staffing
- Training
- Coaching & Supervision
- Racial equity impact assessment
- Data Systems Technology Supports (IT)
- Administration & System



Facilitator(s):

Today's Date:

Individuals Participating in the Assessment:

Innovation Being Assessed:

Identified Need to be Addressed:

Identify the innovation to be assessed. Write the numerical rating that best describes each component below.

		INNOVATION 1	INNOVATION 2	INNOVATION 3
INNOVATION INDICATORS	EVIDENCE			
	USABILITY			
	SUPPORTS			
SYSTEM INDICATORS	NEED			
	FIT			
	CAPACITY			

1. Are there research data available to demonstrate the effectiveness (e.g. randomized trials, quasi-experimental designs) of the innovation? If yes, provide citations or links to reports or publications.
2. What is the strength of the evidence? Under what conditions was the evidence developed?
3. What outcomes are expected when the innovation is implemented as intended? How much of a change can be expected?
4. If research data are not available, are there evaluation data to indicate effectiveness (e.g. pre/post data, testing results, action research)? If yes, provide citations or links to evaluation reports.
5. Is there practice-based evidence or community-defined evidence to indicate effectiveness? If yes, provide citations or links.
6. Is there a well-developed theory of change or logic model that demonstrates how the innovation is expected to contribute to short term and long-term outcomes?
7. Do the studies (research and/or evaluation) provide data specific to the setting in which it will be implemented (e.g., has the innovation been researched or evaluated in a similar context)?  
If yes, provide citations or links to evaluation reports.
8. Do the studies (research and/or evaluation) provide data specific to effectiveness for culturally and linguistically specific populations? If yes, provide citations or links specific to effectiveness for families or communities from diverse cultural groups
9. Add additional question

**Ratings** - Does the Innovation demonstrate a statistically significant effect on improving outcomes?

5 Strong Evidence from experimental study; or

4 Moderate Evidence from quasi-experimental study; or

3 Promising Evidence from correlational study; or

2 Demonstrates a Rationale *based on high-quality research findings (evidence informed)* and it is likely to improve outcomes. *Includes ongoing efforts to examine the effects (PDSA-Cycles).*

1 No Evidence

Additional Questions/ Notes

1. Is the innovation clearly defined (e.g. what it is, for whom it is intended)?
2. Are core features of the innovation identified, listed, named (e.g. key components of the innovation that are required in order to be effective)?
3. Is each core feature well operationalized (e.g., staff know what to do and say, how to prepare, how to assess progress)?
4. Is there guidance on core features that can be modified or adapted to increase contextual fit?
5. Is there a fidelity assessment that measures practitioner behavior (i.e., assessment of whether staff use the innovation as intended)? If yes, provide citations, documents, or links to fidelity assessment information.
6. Has the innovation been adapted for use within culturally and linguistically specific populations and/or is there a recommended process for gathering community input into culturally specific enhancements?
7. What do we know about the key reasons for previous successful replications?
8. What do we know about the key problems that led to unsuccessful replication efforts previously?
9. Are there mature examples with successful histories of implementing the innovation who are willing to be observed?
10. Add Additional questions
11. Add Additional questions

**Ratings**

**5 Highly Usable**

The innovation has operationalized principles and values, core components that are measurable and observable, and a validated fidelity assessment; modifiable components are identified to support contextualization for new settings or populations

**4 Usable**

The innovation has operationalized principles and values and core components that are measurable and observable but does not have a fidelity assessment; modifiable components are identified to support contextualization for new settings or populations

**3 Somewhat Usable**

The innovation has operationalized principles and values and core components that are measurable and observable but does not have a fidelity assessment; modifiable components are not identified

**2 Minimally Usable**

The innovation has identified principles and values and core components; however, the principles and core components are not defined in measurable or observable terms; modifiable components are not identified

**1 Not Usable**

The innovation does not identify principles and values or core components

Additional Questions/ Notes

1. Is there a qualified “expert” (e.g., consultant, innovation developer, intermediary, technical assistance provider) who can help with implementation over time? If yes, list names and/or organization (e.g. Center, University) and contacts.
2. Are there start-up costs for implementation of the innovation (e.g., fees to the innovation developer)? If yes, itemize in notes section. What does the organization receive for these costs?
3. Are there curricula and other resources related to the innovation readily available? If so, list publisher or links. What is the cost of these materials? Enter in notes section.
4. Is training and professional development related to this innovation readily available? Is training culturally sensitive? Does it address issues of race equity, cultural responsiveness or implicit bias? Include the source of training and professional development. What is the cost of these materials? Enter in notes section.
5. Is coaching available for this innovation? Is coaching culturally sensitive? If so, list coaching resources and cost in notes section.
6. Are sample job descriptions and interview protocols available for hiring or selecting new staff for this innovation? If so, identify here and any costs associated.
7. Is guidance on administrative policies and procedures available? If so, identify resources and any costs associated.
8. Are there resources to develop a data management plan for this innovation (including data system and monitoring tools) available? If so, identify resources and any costs associated.
9. Is there a recommended orientation to facilitate “buy-in” for staff, key stakeholders and collaborative partners? If so, explain/describe briefly in notes section.
10. Add additional question
11. Add additional question

**Ratings**

**5 Well Supported**

Comprehensive resources are available from an expert (a innovation developer or intermediary) to support implementation, including resources for building the competency of staff (staff selection, training, coaching, fidelity) and organizational practice (data system and data use support, policies and procedures, stakeholder and partner engagement.)

**4 Supported**

Some resources are available to support implementation, such as resources to support staff competency but not organizational practice

**3 Somewhat Supported**

Limited resources are available, such as a curriculum available for purchase

**2 Minimally Supported**

General guidance provided (such as suggestion to use strengths-based approaches with staff) but no specific resources

**1 Not Supported**

Few to no resources to support implementation

**Additional Questions/ Notes**

1. Who is the identified population of concern?
2. What is/are the identified needs of this population?
3. Was an analysis of data conducted to identify specific area(s) of need relevant to the innovation? If yes, what data were analyzed? Were these data disaggregated by race, ethnicity and language?
4. How do affected individuals and community members perceive their need? What do they believe will be helpful? How were community members engaged to assess their perception of need?
5. Is there evidence that the innovation addresses the specific area(s) of need identified? If so, how was this evidence generated (e.g., experimental research design, quasi- experimental research design, pre-post, descriptive)?
6. If the innovation is implemented, what can potentially change for this population?
7. Add additional questions if needed
8. Add additional questions if needed

### Ratings

#### 5 Strongly Meets Need

The innovation has demonstrated meeting need for identified population through rigorous research (e.g., experimental design) with comparable population; disaggregated data have been analyzed to demonstrate innovation meets need of specific subpopulations

#### 4 Meets Need

The innovation has demonstrated meeting need for identified population through rigorous research (e.g., experimental design) with comparable population; disaggregated data have not been analyzed for specific subpopulation

#### 3 Somewhat Meets Need

The innovation has demonstrated meeting need for identified population through less rigorous research design (e.g., quasi-experimental, pre-post) with comparable population; disaggregated data have not been analyzed for specific subpopulation

#### 2 Minimally Meets Need

The innovation has demonstrated meeting need for identified population through practice experience; disaggregated data have not been analyzed for specific subpopulation

#### 1 Does Not Meet Need

The innovation has not demonstrated meeting need for identified population

### Additional Questions/ Notes

1. How does the innovation fit with priorities of the organization?
2. How does the innovation fit with family and community values in the impacted community, including the values of culturally and linguistically specific populations?
3. What other initiatives currently being implemented will intersect with the innovation?
4. How does the innovation fit with other existing initiatives?
5. Will the other initiatives make it easier or more difficult to implement the proposed innovation and achieve the desired outcomes?
6. How does the innovation fit with the community's history?
7. Add additional questions if needed
8. Add additional questions if needed

### Ratings

#### 5 Strong Fit

The innovation fits with the priorities of the organization; community values, including the values of culturally and linguistically specific populations; and other existing initiatives

#### 4 Fit

The innovation fits with the priorities of the organization and community values; however, the values of culturally and linguistically specific population have not been assessed for fit

#### 3 Somewhat Fit

The innovation fits with the priorities of the organization, but it is unclear whether it aligns with community values and other existing initiatives

#### 2 Minimal Fit

The innovation fits with some of the priorities of the organization, but it is unclear whether it aligns with community values and other existing initiatives

#### 1 Does Not Fit

The innovation does not fit with the priorities of the organization or community values

### Additional Questions/ Notes

1. Typically, how much does it cost to run the innovation each year? Are there resources to support this cost? If the current budget cannot support this format, outline a resource development strategy.
2. What are the staffing requirements for the innovation? (Number and type of staff, e.g., education, credentials, content knowledge)
3. Does the organization currently employ or have access to staff that meet these requirements?
4. If so, do those staff have a cultural and language match with the population they serve, as well as relationships in community?
5. What administrative practices must be developed or refined to support the use of this innovation?
6. Is leadership knowledgeable about and in support of this innovation? Do leaders have the diverse skills and perspectives representative of the community being served?
7. Do staff have the capacity to collect and use data to inform ongoing monitoring and improvement of the innovation?
8. What administrative policies or procedures must be adjusted to support the work of practitioners and others to implement the innovation?
9. Will the current communication system facilitate effective internal and external communication with stakeholders, including impacted families and the community?
10. Will the innovation require use of or changes to building facilities? Use notes section to explain. List required uses of and/or changes. Include costs if known.
11. Does the innovation require new technology (hardware or software, such as a data system)? Use notes section to explain. List required hardware and/or software. Include costs if known.
12. Does the innovation require use of or changes to the monitoring and reporting system? Use notes section to explain. List required uses of and/or changes. Include costs if known.
13. Add additional questions if needed

## **Ratings**

### **5 Strong Capacity**

The organization adopting this innovation has all of the capacity necessary, including a qualified workforce, financial supports, technology supports, and administrative supports required to implement and sustain the innovation with integrity

### **4 Adequate Capacity**

The organization adopting this innovation has most of the capacity necessary, including a qualified workforce, financial supports, technology supports, and administrative supports required to implement and sustain the innovation with integrity

### **3 Some Capacity**

The organization adopting this innovation has some of the capacity necessary, including a qualified workforce, financial supports, technology supports, and administrative supports required to implement and sustain the innovation with integrity

### **2 Minimal Capacity**

The organization adopting this innovation has minimal capacity necessary, including a qualified workforce, financial supports, technology supports, and administrative supports required to implement and sustain the innovation with integrity

### **1 No Capacity**

The organization adopting this innovation does not have the capacity necessary, including a qualified workforce, financial supports, technology supports, and administrative supports required to implement and sustain the innovation with integrity

Additional Questions/ Notes

# Visible Learning<sup>plus</sup> 250+ Influences on Student Achievement

STUDENT	ES
<b>Prior knowledge and background</b>	
Field independence	0.68
Non-standard dialect use	-0.29
Piagetian programs	1.28
Prior ability	0.94
Prior achievement	0.55
Relating creativity to achievement	0.40
Relations of high school to university achievement	0.60
Relations of high school achievement to career performance	0.38
Self-reported grades	1.33
Working memory strength	0.57
<b>Beliefs, attitudes and dispositions</b>	
Attitude to content domains	0.35
Concentration/persistence/ engagement	0.56
Grit/incremental vs. entity thinking	0.25
Mindfulness	0.29
Morning vs. evening	0.12
Perceived task value	0.46
Positive ethnic self-identity	0.12
Positive self-concept	0.41
Self-efficacy	0.92
Stereotype threat	0.33
Student personality attributes	0.26
<b>Motivational approach, orientation</b>	
Achieving motivation and approach	0.44
Boredom	-0.49
Deep motivation and approach	0.69
Depression	-0.36
Lack of stress	0.17
Mastery goals	0.06
Motivation	0.42
Performance goals	-0.01
Reducing anxiety	0.42
Surface motivation and approach	-0.11
<b>Physical influences</b>	
ADHD	-0.90
ADHD – treatment with drugs	0.32
Breastfeeding	0.04
Deafness	-0.61
Exercise/relaxation	0.26
Gender on achievement	0.08
Lack of illness	0.26
Lack of sleep	-0.05
Full compared to pre-term/low birth weight	0.57
Relative age within a class	0.45

CURRICULA	ES
<b>Reading, writing and the arts</b>	
Comprehensive instructional programs for teachers	0.72
Comprehension programs	0.47
Drama/arts programs	0.38
Exposure to reading	0.43
Music programs	0.37
Phonics instruction	0.70
Repeated reading programs	0.75
Second/third chance programs	0.53
Sentence combining programs	0.15
Spelling programs	0.58
Visual-perception programs	0.55
Vocabulary programs	0.62
Whole language approach	0.06
Writing programs	0.45
<b>Math and sciences</b>	
Manipulative materials on math	0.30
Mathematics programs	0.59
Science programs	0.48
Use of calculators	0.27
<b>Other curricula programs</b>	
Bilingual programs	0.36
Career interventions	0.38
Chess instruction	0.34
Conceptual change programs	0.99
Creativity programs	0.62
Diversity courses	0.09
Extra-curricula programs	0.20
Integrated curricula programs	0.47
Juvenile delinquent programs	0.12
Motivation/character programs	0.34
Outdoor/adventure programs	0.43
Perceptual-motor programs	0.08
Play programs	0.50
Social skills programs	0.39
Tactile stimulation programs	0.58

HOME	ES
<b>Family structure</b>	
Adopted vs non-adopted care	0.25
Engaged vs disengaged fathers	0.20
Intact (two-parent) families	0.23
Other family structure	0.16
<b>Home environment</b>	
Corporal punishment in the home	-0.33
Early years' interventions	0.44
Home visiting	0.29
Moving between schools	-0.34
Parental autonomy support	0.15
Parental involvement	0.50
Parental military deployment	-0.16
Positive family/home dynamics	0.52
Television	-0.18
<b>Family resources</b>	
Family on welfare/state aid	-0.12
Non-immigrant background	0.01
Parental employment	0.03
Socio-economic status	0.52

SCHOOL	ES
<b>Leadership</b>	
Collective teacher efficacy	1.57
Principals/school leaders	0.32
School climate	0.32
<b>School resourcing</b>	
External accountability systems	0.31
Finances	0.21
<b>Types of school</b>	
Charter schools	0.09
Religious schools	0.24
Single-sex schools	0.08
Summer school	0.23
Summer vacation effect	-0.02
<b>School compositional effects</b>	
College halls of residence	0.05
Desegregation	0.28
Diverse student body	0.10
Middle schools' interventions	0.08
Out-of-school curricula experiences	0.26
School choice programs	0.12
School size (600-900 students at secondary)	0.43
<b>Other school factors</b>	
Counseling effects	0.35
Generalized school effects	0.48
Modifying school calendars/timetables	0.09
Pre-school programs	0.28
Suspension/expelling students	-0.20

The Visible Learning research synthesises findings from **1,400** meta-analyses of **80,000** studies involving **300** million students, into what works best in education.

## Key for rating

- Potential to considerably accelerate student achievement
- Potential to accelerate student achievement
- Likely to have positive impact on student achievement
- Likely to have small positive impact on student achievement
- Likely to have a negative impact on student achievement

ES Effect size calculated using Cohen's *d*



# Visible Learning<sup>plus</sup> 250+ Influences on Student Achievement

CLASSROOM	ES
<b>Classroom composition effects</b>	
Detracking	0.09
Mainstreaming/inclusion	0.27
Multi-grade/age classes	0.04
Open vs. traditional classrooms	0.01
Reducing class size	0.21
Retention (holding students back)	-0.32
Small group learning	0.47
Tracking/streaming	0.12
Within class grouping	0.18
<b>School curricula for gifted students</b>	
Ability grouping for gifted students	0.30
Acceleration programs	0.68
Enrichment programs	0.53
<b>Classroom influences</b>	
Background music	0.10
Behavioral intervention programs	0.62
Classroom management	0.35
Cognitive behavioral programs	0.29
Decreasing disruptive behavior	0.34
Mentoring	0.12
Positive peer influences	0.53
Strong classroom cohesion	0.44
Students feeling disliked	-0.19

TEACHER	ES
<b>Teacher attributes</b>	
Average teacher effects	0.32
Teacher clarity	0.75
Teacher credibility	0.90
Teacher estimates of achievement	1.29
Teacher expectations	0.43
Teacher personality attributes	0.23
Teacher performance pay	0.05
Teacher verbal ability	0.22
<b>Teacher-student interactions</b>	
Student rating of quality of teaching	0.50
Teachers not labeling students	0.61
Teacher-student relationships	0.52
<b>Teacher education</b>	
Initial teacher training programs	0.12
Micro-teaching/video review of lessons	0.88
Professional development programs	0.41
Teacher subject matter knowledge	0.11

TEACHING: Focus on student learning strategies	ES
<b>Strategies emphasizing student meta-cognitive/self-regulated learning</b>	
Elaboration and organization	0.75
Elaborative interrogation	0.42
Evaluation and reflection	0.75
Meta-cognitive strategies	0.60
Help seeking	0.72
Self-regulation strategies	0.52
Self-verbalization and self-questioning	0.55
Strategy monitoring	0.58
Transfer strategies	0.86
<b>Student-focused interventions</b>	
Aptitude/treatment interactions	0.19
Individualized instruction	0.23
Matching style of learning	0.31
Student-centered teaching	0.36
Student control over learning	0.02
<b>Strategies emphasizing student perspectives in learning</b>	
Peer tutoring	0.53
Volunteer tutors	0.26
<b>Learning strategies</b>	
Deliberate practice	0.79
Effort	0.77
Imagery	0.45
Interleaved practice	0.21
Mnemonics	0.76
Note taking	0.50
Outlining and transforming	0.66
Practice testing	0.54
Record keeping	0.52
Rehearsal and memorization	0.73
Spaced vs. mass practice	0.60
Strategy to integrate with prior knowledge	0.93
Study skills	0.46
Summarization	0.79
Teaching test taking and coaching	0.30
Time on task	0.49
Underlining and highlighting	0.50

TEACHING: Focus on teaching/instructional strategies	ES
<b>Strategies emphasizing learning intentions</b>	
Appropriately challenging goals	0.59
Behavioral organizers	0.42
Clear goal intentions	0.48
Cognitive task analysis	1.29
Concept mapping	0.64
Goal commitment	0.40
Learning goals vs. no goals	0.68
Learning hierarchies-based approach	0.19
Planning and prediction	0.76
Setting standards for self-judgement	0.62
<b>Strategies emphasizing success criteria</b>	
Mastery learning	0.57
Worked examples	0.37
<b>Strategies emphasizing feedback</b>	
Classroom discussion	0.82
Different types of testing	0.12
Feedback	0.70
Providing formative evaluation	0.48
Questioning	0.48
Response to intervention	1.29
<b>Teaching/instructional strategies</b>	
Adjunct aids	0.32
Collaborative learning	0.34
Competitive vs. individualistic learning	0.24
Cooperative learning	0.40
Cooperative vs. competitive learning	0.53
Cooperative vs. individualistic learning	0.55
Direct instruction	0.60
Discovery-based teaching	0.21
Explicit teaching strategies	0.57
Humor	0.04
Inductive teaching	0.44
Inquiry-based teaching	0.40
Jigsaw method	1.20
Philosophy in schools	0.43
Problem-based learning	0.26
Problem-solving teaching	0.68
Reciprocal teaching	0.74
Scaffolding	0.82
Teaching communication skills and strategies	0.43

TEACHING: Focus on implementation method	ES
<b>Implementations using technologies</b>	
Clickers	0.22
Gaming/simulations	0.35
Information communications technology (ICT)	0.47
Intelligent tutoring systems	0.48
Interactive video methods	0.54
Mobile phones	0.37
One-on-one laptops	0.16
Online and digital tools	0.29
Programmed instruction	0.23
Technology in distance education	0.01
Technology in mathematics	0.33
Technology in other subjects	0.55
Technology in reading/literacy	0.29
Technology in science	0.23
Technology in small groups	0.21
Technology in writing	0.42
Technology with college students	0.42
Technology with elementary students	0.44
Technology with high school students	0.30
Technology with learning needs students	0.57
Use of PowerPoint	0.26
Visual/audio-visual methods	0.22
Web-based learning	0.18
<b>Implementations using out-of-school learning</b>	
After-school programs	0.40
Distance education	0.13
Home-school programs	0.16
Homework	0.29
Service learning	0.58
<b>Implementations that emphasize school-wide teaching strategies</b>	
Co- or team teaching	0.19
Interventions for students with learning needs	0.77
Student support programs – college	0.21
Teaching creative thinking	0.34
Whole-school improvement programs	0.28

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# Tier I Resources: HLPs and EBPs

Resource  
#4

- What Works Clearinghouse: What works Clearinghouse is a central source of scientific evidence for what works in education <https://ies.ed.gov/ncee/wwc/>
- IES Practice Guides: Institute of Education Sciences (IES) Practice Guides are subjected to rigorous external peer review and consist of recommendations, strategies, and indications of the strength of evidence supporting each recommendation <https://eric.ed.gov/>
- Best Evidence Encyclopedia: Best Evidence Encyclopedia offers information to improve learning for students in grades K-12 and particularly targets students in mathematics, special needs/diverse learners, and English language learners <http://www.bestevidence.org/?ad=6>
- IRIS Center: [http://iris.peabody.vanderbilt.edu/ebp\\_summaries/](http://iris.peabody.vanderbilt.edu/ebp_summaries/)
- Teaching Works: High Leverage Practices (Ball): <http://www.teachingworks.org/work-of-teaching/high-leverage-practices>
- CEEDAR Center: <http://cedar.education.ufl.edu/>
- Evidence-based Intervention Network: <http://ebi.missouri.edu/>
- High-Leverage Practices in Special Education: <http://cedar.education.ufl.edu/wp-content/uploads/2017/07/CEC-HLP-Web.pdf>