Utah State Board of Education | Teaching and Learning

Utah's Critical Features of Tiered Literacy Interventions

Overview

Tier II (supplemental) and Tier III (intensive) interventions include evidence-based programs, practices, and strategies provided to students who require additional support after receiving core literacy instruction (Tier I). The purpose of Tier II & III literacy interventions is to reduce the risk of future potential literacy failure. Table 1 below provides a quick overview of the components of tiered literacy interventions along with a description of each critical feature.

Table 1: Critical Features of Tiered Literacy Interventions	
Who receives instruction	Students who are not making adequate progress with Tier I instruction **and** have demonstrated below and/or well-below benchmark status on Acadience Reading.
Amount of daily instruction time **(Dosage)**	Daily instruction time may vary, depending on the data-driven needs of the student (i.e., 15-60 minutes).
Recurrence of instruction **(Frequency)**	Frequency of Instruction may vary, depending on the data-driven needs and time constraints of the school or district master schedule. • Three to five instructional occasions are typical. • If daily instruction proves insufficient, twice daily may be prescribed in rare circumstances to affect necessary catch-up growth.
Length of Intervention **(Duration)**	The number of weeks may vary, but a minimum of 10–14 weeks is recommended. • If the student is responding to the intervention, continue with the intervention until the student is at benchmark.

	• Some students may need more weeks or an additional round of Tier 2/3 intervention.
Instructional Delivery **(Intensity)**	Instruction is typically implemented with teacher/student ratio of 1:5. A ratio of 1:3 may be necessary to achieve a more intense student instructional practice and response rate.
Progress Monitoring Frequency	• At least once every 2-4 weeks for Tier 2 • At least once every 1-2 weeks for Tier 3
Who provides instruction	Trained personnel may include: • Classroom teacher • Reading specialist • Specifically trained paraprofessionals • Other support personnel (e.g., Speech-language pathologist (SLP), Title 1 reading teacher or specifically trained Title 1 reading aide)
Effective Intervention Instruction	When providing intervention instruction, it should: • Focus on literacy skill gaps identified by a universal screener and/or diagnostic assessments • Be explicit • Check that students are practicing the strategy correctly • Require students to demonstrate accuracy and fluency • Have students repeat instructions • Offer timely corrective feedback to individual students • Maintain high expectations for all students • Provide students with multiple examples • Provide sufficient practice before students are asked to work independently
Evidence of Impact	Use literacy intervention materials or practices supported by strong or moderate evidence, such as those found on

	The National Center on Intensive Intervention, What Works Clearinghouse, ESSA for Evidence, etc. **Be sure to use programs or practices with an effect size of 0.40 or higher for impact on student learning**.

Essential Components of Tier II & III Literacy Interventions

When providing tiered interventions, there are essential components that ensure the instruction is high-quality. These essential components are data driven, explicit instruction, systematic instruction, opportunities to practice, frequent feedback, and progress monitoring.

Addresses Data Driven Student Needs

Tiered interventions should focus on identified, by diagnostic assessment, essential literacy skills that the student needs to develop. Specific decision rules should be developed to determine which students would benefit from a specific Tier II & III intervention (See Valencia & Buly, 2004). These entry criteria are used to match students to interventions that address their specific skill needs.

In the primary grades, the focus of intervention instruction should be on one or more of the essential components of early reading instruction (phonological awareness, phonics, fluency, vocabulary, and/or comprehension).

Yes: When a student uses Boost Reading for the first time, the program determines the initial level of content they will see, based on their unique learning needs. Students are placed into the adaptive Boost Reading learning map by using their most recent supported assessment data or by taking the Boost Reading Benchmark Assessment. For example, a second-grade student's assessment data may show that they are not meeting grade-level expectations and struggling with basic reading skills. In Boost Reading, this particular student's placement would allow for practice in basic phonics skills like the sounds of common letter combinations, *and* basic vocabulary and comprehension skills, such as inferences and main ideas. Based on a student's personalized placement, Boost Reading will provide advancement and remediation as needed for different still domains.

Additionally, Boost Reading's adaptive algorithm continuously analyzes student performance to determine how a student should move through the program's unique sequence of instruction, allowing them to progress at different rates through each skill domain, based on their evolving abilities and needs. Every student in Boost Reading follows a path through skill games and content that is driven by their needs. The system maintains a rich profile for each student as they master or struggle with each skill, and it tailors the content students see in games, based on their individual strengths and opportunities for improvement.

Finally, at the middle of the year, students may be re-placed with updated assessment data or the middle-of-the-year Boost Reading Benchmark Assessment. Student re-placement allows students to experience content for skill games that is in line with their strengths and areas of need based on their most recent assessment results.

Explicit Instruction

Typically, literacy intervention instruction should be explicit. Explicit instruction is defined as "a way of teaching where the teacher selects an important objective, specifies the learning outcome, designs structured instructional experiences, explains directly, models the skills being taught, and provides scaffolded practice to help a student achieve mastery" (Kearns, 2018). Explicit instruction may employ a routine that:

1. Reviews relevant previous learning and/or prerequisite skills and knowledge.

2. States the learning intentions and success criteria.

3. Explain why, when, and where the to be learned concepts, skills or strategies will be useful for the student (relevance).

4. Model by providing examples and non-examples, using accessible academic language, and avoiding digressions.

5. Guides student practice that requires sufficient practice attempts, a high frequency of responses, ensures high rates of success, with timely affirmative or corrective feedback and prompts/scaffolds as students continue to practice until they are successful.

6. Provides monitored independent practice during initial practice attempts.

7. Provides continuous practice as students build automaticity and fluency.

8. Provides distributed practice of previously learned concepts through planned review cycles.

Yes: Instruction in Boost Reading capitalizes on the benefits of computer-based instruction to implement research-based instructional methods. Instructional routines are explicit and scripted according to what a highly skilled teacher or interventionist would do and say to present a new skill and in response to both correct and incorrect student responses, allowing all students equal opportunity to experience evidence-based instructional practices (Moats, 2014). New skills and concepts are introduced and practiced in a variety of games. While the games are highly engaging and fun for students, the format of the games also allow for the teaching of skills and strategies using the key principles of instructional design.

After a brief introduction to each activity, students are given repeated opportunities to practice these skills with varied stimuli. They receive immediate feedback for their responses and are given more explicit instruction in areas that may be challenging. The activities engage students in multiple opportunities to practice critical skills at an appropriate pace with consistent feedback and prioritize student engagement and motivation, helping students to see their own growth toward reading goals (Carnine, Silbert, Kame'enui, Slocum, & Travers, 2016; Deci & Ryan, 2012; Gersten et al., 2008).

Further, the games within Boost Reading all have specific mastery criteria built into them. Content within a game is leveled according to difficulty, and students only progress to the next level if they meet a certain benchmark. If that score is not met, students continue to practice the skill at the current level of difficulty in the context of additional instruction. If the student struggles to meet the mastery criteria after three

attempts, the game for that subskill is temporarily removed from the student's learning map. The student will then receive practice with precursor skills, and encounter the challenging content again within the program. If the student struggles with the content again, the teacher is alerted that the student has hit a Trouble Spot, and is provided a set of optional teacher-delivered lessons to use to help reteach the student that skill. Within Boost Reading, the students will automatically receive instruction and practice in related skills, and only after students have demonstrated mastery in those skills will they return to the skill that was a Trouble Spot. The student will see these levels again after some time has passed to allow the student time to practice related skills.

Systematic Instruction

Literacy intervention instruction should be systematic rather than incidental. Systematic instruction is characterized by:

- Meticulous selection of knowledge, skills, and strategies to be learned.
- Logical, informed sequencing of the knowledge, skills, and strategies to be learned. This is often found in a "scope and sequence" table or document.
- Knowledge, skills, and strategies to be learned are broken down into cognitively manageable instructional units based on a curriculum map or similar planning document.

Yes: The ordering of sounds and phonics skills is aligned with that of the Core Knowledge Language Arts reading program, a research-based core reading program documented to impact students' skills in decoding, spelling, and oral comprehension (New York City Department of Education: Research Policy and Support Group, 2010; 2011; 2012). As soon as specific phonics skills are introduced, students engage in activities that require them to decode and build their automaticity in reading words and spelling with those specific sounds. They then move to reading short, decodable text that includes words with those sounds. Students engage in distributed practice or multiple exposures to a concept or skill, spaced over time to promote mastery of skills (Carpenter et al., 2012; Cepeda et al., 2006; Toppino & Gerbier, 2014). Since learning is promoted when students use their knowledge across tasks (e.g., Merrill, 2002), generalization is encouraged through ebooks with embedded activities that reinforce skills recently practiced in related games.

The content served to each student within Boost Reading is driven by a learning map and adaptive algorithm. The learning map is the complete scope and sequence of content included across all literacy domains - phonological awareness, phonics, vocabulary, comprehension, and fluency. The content is sequenced according to research-based scopes and sequences of skills and the principles of systematic instruction.

Opportunities to Practice with Feedback

Intervention instruction includes a deliberate plan to maximize student opportunities to respond. This is operationalized through the design of the group size as well as the design of the instructional delivery. Literacy interventions should be characterized by brisk instructional pacing that increases the amount of content covered. Each student should have multiple opportunities to practice through active engagement with immediate affirmative or corrective feedback. It should also be based upon a deliberate practice model or plan that includes initial practice, distributed practice, and cumulative practice.

Yes: All of the items in Boost Reading include some form of corrective feedback, scaffolds, and/or additional instruction for incorrect responses. For every item, students are provided scaffolds or corrective feedback immediately. Students are always provided feedback for their first response whether it is correct or incorrect. This may be in the form of a sound effect, visual cue, or verbal statement about the student's response. When students answer incorrectly for a second time, they are provided a scaffold, like limited answer choices. If students continue to struggle after this degree of scaffolding is provided, in many games students are provided with an instructional loop and additional practice.

Boost Reading includes a variety of multimodal and multisensory scaffolds that are embedded into our instructional content. For example, many Boost Reading activities include multiple representations of content, such as text, visuals, animations, audio, and on-screen manipulatives, to aid students of varying abilities and reading levels in comprehension. In particular, English Learners and struggling readers will benefit from read-aloud functionality, picture supports, on-screen manipulatives, and "mouth" images to support sounds.

In addition, when students fail to master a skill, those levels are temporarily removed from the student's learning map and the classroom teacher is alerted that the student has hit a Trouble Spot and is provided a set of teacher-delivered lessons to use to help reteach the student that skill. Students will be moved within their learning map to receive instruction and practice in related skills, and only after students have demonstrated mastery in those skills will they return to the skill that was a Trouble Spot. The student will see these levels again after some time has passed to allow the student time to practice related skills.

Progress Monitoring

As the intensity of intervention increases, the frequency of progress monitoring should also increase. This includes collecting data on student performance as well as data related to the fidelity of the intervention program or practice used. The specific skills taught should be routinely monitored (i.e., at least every 2-4 weeks). Tier II and III interventions often include progress monitoring and cumulative assessments built into an intervention program (e.g., end of unit mastery tests). Data from these assessments are also used to monitor student performance over time. Progress monitoring data are used to adjust the intervention to obtain the necessary impact on student performance.

Yes: As part of their Boost Reading experience, students receive a monthly assessment, known as the Curioso Skill Scan. It measures their reading growth over time by assessing key skills for their current grade level. The results from these assessments can be used to monitor students' literacy development and guide next steps for instruction, both within and outside of Boost Reading.

The growth assessments included in Boost Reading measure the key reading skills that students in a given grade level are learning. These tasks are found to be broadly predictive of overall reading skill for students in that grade level. In Grades K–1, students are assessed on their decoding skills by completing a word reading activity since instruction and learning in these grades are primarily focused on decoding. In Grades 2–5, students are assessed on fluency and comprehension via a maze task.

Tier III: Intensifying Instruction

When students are not responding to Tier I literacy instruction and targeted Tier II support, students are well-below benchmark, **or** when their literacy learning lags in all essential

elements of early reading (e.g., phonological awareness, phonics, fluency, vocabulary & comprehension), Tier III instruction should be provided. Tier III instruction is not considered special education or limited to students with disabilities. To understand how to adapt intervention instruction for Tier III applications, please see Essential Practice 4 in this guide.

Evaluation Criteria for Evidence-Based Curriculum

As per Utah Code 53E-4-307, intervention materials used with students scoring below or well-below grade level in grades K-3 are required to be evidence-based. Evidence-based is defined by the criteria in the table below. When evaluating materials to determine if they would be considered evidence-based, the materials would need to meet **ALL** the criteria listed.

		Meets Yes/No
Non-negotiables specific to the Science of Reading		
	Curriculum aligns with Science of Reading (see USBE's Science of Reading Criteria)	**Yes**
	Boost Reading is driven by the Science of Reading, which is empirical research that shows the need for students to have word identification skills (such as phonics and fluency) and language knowledge (including knowledge of vocabulary, morphology, and syntax) in order to comprehend text. It also includes an explicit focus on comprehension processes (such as inferencing and monitoring processes) that more and more research considers necessary for reading success (e.g., Kieffer, Biancarosa, & Mancilla-Martinez, 2013; Noble & McCandliss, 2005; Oakhill, Cain, & Elbro, 2015, Rapp, van den Broek, McMaster, Kendeou, & Espin, 2007). We developed the program to provide individualized modeling, guidance, and practice for all students. It includes particular supports for English Learners (ELs) and struggling readers, providing students with visual aids and access to definitions and translations, as well as ample opportunities for modeling, practice with prompting, and in-the-moment feedback. Boost Reading was authored with experts in literacy, cognitive science, learning, and instruction. It builds on well-established principles of effective instructional design and delivery, as well as new and cutting-edge research on how students learn to read. To learn more about the research that supports Boost Reading, refer to our white papers on comprehension (https://amplify.com/index.php?amp-pdf-file=/wp-content/uploads/2023/03/BR_MissingLink_OrangePaper_032223_Web.pdf) & foundational skills (https://amplify.com/index.php?amp-pdf-file=/wp-content/uploads/2023/03/BR_Paper-FoundationalSkills_031823_web-1.pdf) instruction.	
	Effect size of program is 0.40 or higher	**Yes**
	In a recent quasi-experimental study of Boost Reading, there was a significant positive treatment effect of Boost Reading for all grades (K-5)	

	on beginning to end of year reading gains as measured by DIBELS 8. The criteria of an effect size of .40 or higher was met in Grades K and 1 (GK = .55, G1 = .47). Effect sizes for grades 2 through 5 ranged from .18 to .3127. To learn more please refer to Boost Reading's efficacy study: https://amplify.com/index.php?amp-pdf-file=/wp-content/uploads/2023/03/BR_EfficacyData_OrangePaper_032323_v1_web.pdf.	
	Participants of the study include at least two of the grades of the K-3 students	**Yes**
	In a recent quasi-experimental study of Boost Reading, there was a significant positive treatment effect of Boost Reading for all grades (K–5) on beginning to end of year reading gains as measured by DIBELS 8. The criteria of an effect size of .40 or higher was met in Grades K and 1 (GK = .55, G1 = .47).	
	At-risk populations are included	**Yes**
	Participants were kindergarten through fifth grade students from schools across the United States; schools ranged from small to large, and represented city, suburban, town, rural, and charter schools. The demographic breakdown of the treatment group varied slightly by outcome measure; for the DIBELS ORF measure, these students were 56% Hispanic, 18% Black, and 26% White, or Other. Approximately 22% were English Learners, 10% qualified for special education services, and 31% were considered at risk for reading difficulty at the beginning of year based on a well-below benchmark score on DIBELS 8.	
Non-negotiables specific to a well-designed study		
	Sample size >350 **OR** matched samples include participant access to similar literacy programs AND teacher characteristics such as education and teaching experience	**Yes**
	Sample size varied by grade and outcome measure. The treatment group included between 1,088 and 10,383 students per grade and measure. Across all grades, the treatment included between 17,089 to 26,948 students. The matched comparison group included between 3,251 to 29,064 students per grade and measure. Across all grades, the matched comparison group included between 51,250 and 80,824 students.	
	Sampling is random or quasi-random	**Yes**
	Sampling was not random, this was a quasi-experimental study. Propensity-score matching was used to address selection bias.	
Non-negotiables specific to a well-implemented study		
	Sample size attrition accounted for	**Yes**
	Treatment and control groups were not pre-specified; attrition was not a factor. All treatment and comparison students met study criteria through pre-screening prior to matching.	
	Fidelity of usage of product accounted for	**Yes**
	To be included in the treatment group, students had to have used Boost Reading for a minimum of fifteen total hours (i.e., approximately 30 minutes per week) between the beginning of year (BOY) and end of year (EOY) testing during the 2020-2021 school year.	
	Study published by entity independent of software provider	**Yes**
	A team of researchers (independent from Amplify) is working to get this study published in a peer-reviewed journal.	

Sample of Evidence-Based Tiered Literacy Instruction Programs

The table below highlights evidence-based intervention programs that meet the evidence-based criteria list above. The list of programs is a sample of materials available but is not exhaustive.

Program	Area of Focus	Grade Level
Sound Partners	Phonological Awareness Phonics Comprehension Fluency	K-3
Lexia Core5 Reading	Phonological Awareness Phonics Comprehension	K-3
Early Intervention in Reading	Phonological Awareness Phonics Comprehension	K-2
Learning Strategies Curriculum: Fundamentals in the Sentence Writing Strategy	Writing	K-3
Stepping Stones to Literacy	Phonological Awareness Phonics	K
Lindamood Phoneme Sequencing (LiPS)	Phonological Awareness Phonics Comprehension	K-2
Cooperative Integrated Reading and Composition (CIRC)	Comprehension Writing	2-3
Early Steps	Phonological Awareness Phonics Writing	1-2
Peer-Assisted Learning Strategies (PALS)	Phonological Awareness Phonics Fluency Comprehension	1

Sources

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