Intensifying Intervention: Comorbid Reading Comprehension and Executive Functioning Disability

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What is a CLBD?

Students are identified as having a comorbid learning and behavior disorder (CLBD) if they present with simultaneous disabilities such as a reading disability and behavioral disability.

Comorbid Reading Comprehension and Executive Functioning Disorder

Executive functioning plays an important role in reading comprehension—the understanding and interpretation of what is read. "Controlled and strategic allocations of attention, governed by executive function" is a key player in a reader’s ability to plan, integrate prior knowledge with new, attend to information that is only textually relevant, process different components of reading, and retain new information.

There is evidence to support including executive functioning in a theoretical model for reading comprehension, and those readers who struggle with executive functioning will “misallocate attentional resources” in such a way that will leave them with fewer resources to support some of the more foundational comprehension processes like the use of strategies and monitoring comprehension (Follmer, 2018).

* Data-Based Individualization or DBI is a research-based process for individualizing and intensifying interventions through the systematic use of assessment data, validated interventions, and research-based adaptation strategies. To learn more visit: [What is Data-Based Individualization?](#)

Student Profile

The student that would benefit from the use of this taxonomy is an elementary school in grades 4-5 who needs intensive instruction in the areas of reading comprehension and executive functioning skills. A student with this profile might have difficulty staying on task, demonstrating emotional control during challenging tasks (reading comprehension), and using working memory (Dawson, 2013).
Reading Comprehension

Reading comprehension is a task categorized by the identification of component skills that predict reading comprehension such as word decoding, reading fluency, vocabulary knowledge, language comprehension, prior knowledge, comprehension monitoring, and working memory. Areas of deficit that may impact a student's reading comprehension can include reading fluency and oral language proficiency. Students with reading comprehension disabilities may also have deficits in higher-level cognitive processing like working memory, inference making, and comprehension monitoring (Kendeou et al., 2016).

Executive Functioning

Executive function is a broad term that encompasses many higher order skills necessary for independent, goal-directed behavior, including holding and manipulating information in working memory, planning/sequencing multi-step tasks, and ascertaining the "big picture" from a complicated set of details (Denckla, 1989). Deficits in executive functioning may present as the inability to stay on task, recall information, control emotions, manage their time, or think flexibly (Dawson, 2013).

Comorbid Reading Comprehension and Executive Functioning

For students who struggle with executive functioning deficits, open-ended tasks often seen in reading comprehension present a unique challenge that close-ended tasks do not. Specifically, the arbitrary end-point is challenging for students who have executive functioning deficits to manage. Students with this profile often struggle to monitor their comprehension, retain knowledge, and attend to and organize important information in a meaningful way. By tailoring interventions to address both areas of disability we can provide students with a way to create structure and move them towards engaging in self-regulated learning (“Executive function & self-regulation,” 2020).
<table>
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<th>Intensity</th>
<th>Intensive Intervention</th>
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<td><strong>Strength</strong> (How well the selected program</td>
<td>• Educators can go to the NCII academic tools chart to identify reading comprehension and executive functioning interventions that have large effect sizes such as Learning Strategies Curriculum: Assignment Completion Strategy that targets organization, time-management, and self-control skills related to completing assignments (National Centers for Intensive Intervention, 2021).</td>
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<td>works for the student with intensive needs)</td>
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| **Dosage** (Includes the number of opportunities the student has to respond, get feedback, group size, length, and sessions per week) | • Students with severe reading difficulties in elementary school served in groups of 1:1 or 1:3 are associated with larger effect sizes than bigger groups (Vaughn et al., 2010).  
• For students who need more intensive support, we can increase the intervention duration, the frequency of intervention per week, or the number of weeks the intervention lasts.  
• Incorporate a token economy or self-monitoring checklist (Ziolkos & Ziolkos, 2003).  
• Make the reinforcement schedule denser during the intervention to increase the frequency with which the student accesses reinforcement (Hoch et al., 2002). |
| **Alignment** (How well the program addresses the students specific academic/behavioral needs, addresses school wide and classroom expectations, and does not address extraneous skills) | • A self-monitoring intervention (token economy/self-monitoring chart) paired with the academic intervention mentioned above will increase student ownership and awareness of engagement during non-preferred activities (Ziolkos & Ziolkos, 2003).  
• The packaged intervention will utilize and provide reinforcement preferred and dictated by the student (Fisher & Mazur, 1997). |
| **Attention to transfer** (The extent to which the program helps the student generalize learned skills to other contexts) | • The purpose of teaching the student to take ownership of their token economy/self-monitoring checklist, is to increase the likelihood that those skills will transfer to other environments where the primary interventionist may not be present or when other academic activities are present (Hughes et al., 1989).  
* In order to promote the transfer of comprehension skills we must support students in practicing applying a new comprehension strategy, teach students how to monitor their own strategy use, and ensure that the student understands the reasoning and value behind the strategy (Schunk & Rice, 1992). |
| **Comprehensiveness** (The extent to which the program includes components of explicit instruction and a plan for teaching, monitoring, and adjusting behavior) | • Educators will walk students through the expectations, and describe the importance of goal setting and task completion (The IRIS Center for Training Enhancements, 2005).  
• Help the student develop goals prior to the start of the assignment. In addition, when incorporating a token board or self-monitoring checklist, interventionists will explain expectations prior to the start of intervention and allow the student to determine the reinforcers they are working for.  
• The interventionist will demonstrate how the token board, or self-monitoring checklist, will be used. They will take the first few intervention sessions to model the use of the supports, before transferring responsibility to the student (The IRIS Center for Training Enhancements, 2005). |
| **Behavioral Support/Academic support?** (The extent to which the program includes a self-regulation and executive function component and minimizes nonpreferred behaviors) | • Additional behavior supports can be incorporated like a self-monitoring checklist or a token board, which can be used to reinforce target behavior, specifically, the completion of each section of the reading intervention. The reinforcement schedule will be informed by the students baseline engagement in reading comprehension. If necessary, interventionists can use an assessment, like the COA (Casey, 2002) to inform the schedule of reinforcement needed to get the student to engage in the non-preferred reading comprehension task. Tokens or points the student earns can be cashed in for back-up reinforcers at predetermined points during the intervention session. Interventionists/teachers can pair these tokens with immediate and behavior specific praise throughout the lesson (Cirino et al., 2017). |
| **Individualization** (The intervention includes a method individualizing the program by making adjustments based on data) | • First, areas of need are identified through the use of reading CBMS (Curriculum-Based Measurements). As the student moves through the targeted intervention, the program is individualized through the use of DIBELS measures that will track the areas of need. This includes the ORF, Retell, and Maze for areas of comprehension (Lemons et al., 2014).  
• We can also collect data on the number of tokens/self-monitoring checks the student earns out of the total available opportunities. We want to see that the percentage of tokens the student earns increases and remains high following implementation, showing that the student is appropriately engaging in reading comprehension activities. This data will inform the point at which we thin the schedule of reinforcement during the intervention. It will also inform if there are points where the schedule is too thin and the student is no longer consistently engaging in appropriate behavior. |
References


