Hammill Institute on Disabilities

Beyond Behavior
2020, Vol. 29(1) 31–41

DOI: 10.1177/1074295620907110
journals.sagepub.com/home/bbx
SAGE

How Grades 4 to 8 Teachers Can Deliver Intensive Vocabulary and Reading Comprehension Interventions to Students With High-Functioning Autism Spectrum Disorder

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Abstract

This article discusses use of a multicomponent intervention to develop the reading skill and performance of grades 4 to 8 students identified with high-functioning autism spectrum disorder. Reading intervention targets for this population are vocabulary, fluency, and comprehension. Reading intervention elements involve explicit vocabulary instruction, repeated reading with sentence-level comprehension, question-answering relationships, and main idea summarization. Included in the article are explicit instructional routines and curricular materials supported by empirical evidence for the intervention elements.

Keywords

autism spectrum disorder, reading comprehension, vocabulary, fluency, research-based interventions

Students with autism spectrum disorder (ASD) have a wide range of developmental and academic needs which can make it challenging to identify effective interventions (Sussman, 2015). However, many students with ASD perform below average on measures of reading comprehension (Keen et al., 2016). Low comprehension performance is concerning for any student progressing through school, with the increasing importance of literacy skills as they age. In fact, once students enter the upper elementary grades, comprehension becomes essential for understanding text and complex vocabulary in content area courses (Knight & Sartini, 2015). For students with ASD, though, there can be wide-ranging needs, with the variation of social-communicative language abilities and performance in different areas of reading making it particularly challenging for practitioners to determine appropriate reading interventions for this population (Randi et al., 2010).

To that end, the purpose of this article is threefold: (a) highlight the unique reading characteristics of students with ASD, specifically students in grades 4 to 8 with high-functioning ASD (HFASD), which describes a student who is able to speak in full sentences, engages in communication, and exhibits inflexible behavioral responses that interfere with functioning in one or more contexts; (b) present implications of the Simple View of Reading (SVR) model; and (c) discuss a research-based multicomponent reading intervention. The reading intervention components aim to remediate reading performance in the areas of vocabulary, fluency, and reading comprehension.

Reader Profiles in HFASD

As we describe reader profiles for this population of students, it is important that we keep two things in mind. One, practitioners must focus on the implementation of evidence-based, intensive Response to Intervention Tier 2 and/or 3 reading interventions that target reading comprehension skills in addressing the academic, behavioral, and social-emotional deficits/needs of grades 4 to 8 students with HFASD. Two, we must design and implement special education and related services programs that provide measurable benefit given the student's capabilities (Yell & Bateman, 2017). Such an approach accounts for the impact of the U.S. Supreme Court's decision in the Endrew F. v.

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Douglas County School District case on providing a free appropriate public education for all students with disabilities, including students with HFASD.

To meet the needs of students with ASD, we must recognize the heterogeneity of ASD which is particularly important when identifying educational practices (McIntyre et al., 2017). Within the literature, adolescent students with ASD present a discrepancy between reading comprehension and word recognition abilities, in that reading comprehension is weaker than word recognition (Henderson et al., 2014). These findings may guide one to generalize that all students with ASD have hyperlexia or are stereotypically identified as "word callers," that is, students with high tested decoding skills and low tested comprehension achievement in comparison to same-aged peers.

That said, recent research suggests that the high decoding and low reading comprehension profile should not be generalized to all students with ASD (Nation et al., 2006). McIntyre and colleagues (2017) reported that 47.3% of assessed children, aged 8 to 16 years old with HFASD, have deficits in both word reading (i.e., phonics), as measured by standardized measures of sight word recognition and phonemic decoding, and comprehension, as measured by standardized measures of linguistic comprehension and reading comprehension. Clearly, these students do not fit the high decoding subgroup profile but rather a low decoding and low comprehension reader profile. Consequently, it is essential to acknowledge that all students with ASD do not display a reader profile of high decoding and low comprehension. Identifying the reading needs of each student with ASD is of the utmost importance.

The evidence indicating complex reader profiles among students with ASD has led researchers to further examine the influence of unique characteristics that may predict instructional needs. Recently, researchers have identified that symptom severity and deficits in social communication may be significant predictors of reading outcomes (e.g., Åsberg et al., 2010; Ricketts et al., 2013). McIntyre and colleagues (2017) found that students with ASD with severe deficits in verbal and nonverbal social communication skills and inflexibility of behavior that interfere with functioning in many contexts were at greater risk of demonstrating poor reading comprehension.

Although symptom severity has shown to be a predictor of reading performance, deficits in word reading, decoding, oral language, vocabulary, and reading fluency have also been shown to impact acquisition of reading skills and reading performance among students with ASD (e.g., Brown et al., 2013; Nation et al., 2006; Solari et al., 2017). Therefore, a multicomponent intervention approach has been suggested as most effective and evaluated for its effectiveness in meaningfully impacting the reading achievement of students with HFASD.

The SVR

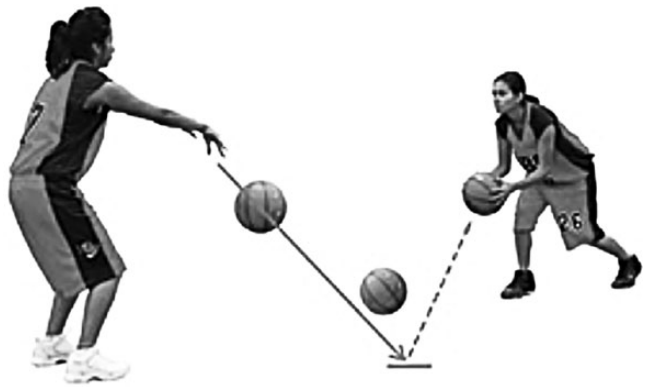
The SVR theory posits that reading is the product of two components: decoding and linguistic comprehension (Gough & Tunmer, 1986). The SVR suggests that decoding involves understanding the relationship between sounds and symbols (i.e., phonics) and word recognition, while linguistic comprehension is related to oral language processing and generating meaning from words (McIntyre et al., 2017). There is significant evidence supporting the SVR among neurotypical children and children with reading disorders (e.g., Catts et al., 2006) with emerging evidence suggesting that SVR may be applicable to children with ASD (Henderson et al., 2014). Studies suggest that oral language comprehension (i.e., vocabulary and grammar) is a significant predictor of reading comprehension among a group of adolescents with ASD, with weaknesses in oral language comprehension resulting in poor reading comprehension (Norbury & Nation, 2011; Ricketts et al., 2013). The cumulation of research findings aimed at identifying skills for remediation among students with HFASD and the SVR model provides a basis for the development of the multicomponent intervention which is described in the remainder of the article.

Multicomponent Reading Intervention Program for Students With HFASD

Findings from systematic reviews of reading interventions provide practitioners with information to teach vocabulary, fluency, and reading comprehension interventions for students with HFASD (see Accardo, 2015; Chiang & Lin, 2007; El Zein et al., 2014; Finnegan & Mazin, 2016; Senokossoff, 2016; Whalon et al., 2009). These systematic reviews suggest that the following components are associated with increased reading performance among students with ASD: (a) explicit vocabulary instruction with visual representations of the vocabulary word, (b) repeated reading fluency instruction associated with improved fluency, and (c) explicit strategy instruction for identifying the main who and what of the passage. These components are collectively delivered as part of a Tier 2/3 intensive reading intervention (i.e., interventions deliberately selected as additional instruction beyond the general classroom instruction and implemented one-on-one or in small groups). When implemented as a multicomponent intervention, practitioners have the potential to make a positive impact on vocabulary and reading performance among students identified with HFASD. The collective program was developed as part of an intensive, ongoing, and iterative federally funded research program.

Component 1: Vocabulary Instruction

Vocabulary knowledge is a central part of reading comprehension (Joshi, 2005). For example, if a vocabulary word is



Related Words or Synonyms	Method, Plan
Example Sentence	Basketball players learn many different techniques, such as the correct way to pass the ball.
Discussion Questions and Sentence Stems	**1.** In your opinion, what is the best technique for making a sandwich? **2.** What are some techniques you could use if you were stuck trying to solve a math problem? **1.** I think the best technique for making a sandwich is … **2.** If I'm stuck trying to solve a math problem, some techniques I could use are …

Figure 1. Vocabulary graphic organizer example.

not a part of a student's oral language repertoire, it is not likely the student will understand the meaning of the word when read in print. Limited vocabulary knowledge can impact the student's fluency and overall reading comprehension performance (Yovanoff et al., 2005). Several methods are identified as evidence-based for teaching vocabulary and have been utilized in instruction for students with ASD: explicit instruction, indirect instruction, multimedia methods (i.e., graphic organizers and visual aids), and association methods (i.e., use of synonyms and related words; Kamps et al., 1995; Solis et al., 2018). Specifically, explicit vocabulary instruction with graphic organizers or visual representations of the vocabulary word is associated with gains in vocabulary knowledge for students with ASD (Reutebuch et al., 2015; Roux et al., 2015).

The following components are described as part of the vocabulary intervention: explicit instruction (i.e., teaching vocabulary definitions before reading them in context), use of visual aids (i.e., graphic organizers), use of related words and synonyms, and discussion questions. Taking the time to directly teach vocabulary in relation to synonyms and visuals that the student may be familiar with provides students the opportunity to build background knowledge and make connections despite having a limited understanding of the word (Nichols & Rupley, 2004). Once target vocabulary words are chosen for instruction, instructional materials can be developed in the form of a graphic organizer with visual aids and related words and synonyms.

Getting started with identifying vocabulary words. There are several methods for selecting words for instruction, such as following Beck and McKeown's (2007) tiered approach, Biemiller's (2007) approach, or identifying words from academic wordlists. Beck and McKeown's approach is a reasonably straightforward method, which suggests providing explicit instruction on "Tier 2" words. Tier 2 words consist of high-frequency words that can be used across a variety of domains and are less likely to be independently learned. In comparison, Tier 1 words such as warm, cold, cat, and dog are basic words that are typically learned outside the school setting, whereas Tier 3 words are low-frequency words that are generally limited to a specific domain (e.g., photosynthesis, mitochondria). After identifying target words for instruction, practitioners can cross-reference the chosen words with academic word lists that aim to include useful words for instruction, such as the High-incidence Academic Word List by Coxhead (2000) and the Academic Vocabulary List by Gardner and Davies (2014). Next, the instructional materials for instruction can be developed.

Putting vocabulary materials together. A vocabulary word should be presented in large font size followed by a clear and concise definition of the word. Oftentimes, that will mean modifying the definition to include only comprehensible words for students. Below the definition, include a student-friendly image to provide a visual representation of the word's meaning. In addition, two to three related words

Vocabulary Lesson Plan		
Student Objectives	**Component**	**Duration**
• Students will increase vocabulary knowledge • Students will be able to demonstrate use of new vocabulary	**Materials:** Vocabulary graphic organizer **Preparation:** • Prepare vocabulary graphic organizer **Instructional Procedure:** **1.** Distribute graphic organizer **2.** Introduce the vocabulary word and definition ○ Instruct student to repeat the word and definition after you **3.** Introduce the visual representation ○ Provide an explanation of how the visual relates to the vocabulary word **4.** Present the synonyms or related words ○ Explain how those words are related to the vocabulary word ○ Prompt the student to read the words **5.** Read the example sentence of the word used in context and/or prompt student to independently read the sentence **6.** Present the discussion questions ○ Engage in conversations to elicit prior knowledge and higher-order thinking ○ *Note:* Have students explain their reasoning **Instructional Reminders and Feedback:** • Ensure students utilize the new vocabulary word and its definition at least 7 times during instruction. • Error correction procedure: Tell the student the word. Have student repeat the word. Tell student the definition. Have student repeat the definition. Have student identify correct use of the new vocabulary word.	10 min

Figure 2. Vocabulary lesson plan example.

or synonyms, example sentences, discussion questions, and sentence stems may be included as needed.

Skilled readers apply prior knowledge during reading. However, students with HFASD may not utilize this strategy to support reading comprehension (Carnahan et al., 2011). The use of discussion questions is designed to intentionally activate the student's prior knowledge in long-term memory, increasing the likelihood that prior knowledge will be used to interpret the reading passage, and, in turn, enhancing student recall and comprehension (Carr & Thompson, 1996; Spires & Donley, 1998). One discussion question can be developed to elicit students' prior knowledge and promote application of the word related to personal experiences. A second question can be designed to promote higher-order thinking. In addition, sentence stems can be developed as a means to scaffold support for students who need additional guidance (Rodriguez-Mojica & Briceño, 2018). Sentence stems should be thought of as scaffold support, in the sense that, the sentence stems are developed based on the student's current understanding and needs. The use of sentence stems is gradually removed until the student independently completes the task (van de Pol et al., 2010).

Sentences can be constructed before instruction or they can be created orally during instruction. As such, the sentence stems are based on the discussion question and target vocabulary word. The vocabulary word is embedded in the example sentence stem, which allows the student to use the vocabulary word successfully. Discussion should occur regarding the word's meaning and require the student to demonstrate comprehension of the word's meaning. Figure 1 provides an example of a complete graphic organizer developed for the vocabulary word *technique*.

Teaching vocabulary to students with HFASD. The following instructional routine outlines how to explicitly teach vocabulary to students with HFASD: (a) display the word including the simplified definition, (b) read the vocabulary word and definition to the student and then prompt the student to read the word and definition, (c) direct the student to focus on the visual representation and facilitate a brief discussion of how the visual is related to the word, (d) present the synonyms and explain that those words are related words to the vocabulary word and then prompt the student to read the synonyms, (e) read the example sentence of the word used in context and/or prompt the student to independently read the sentence, (f) present the discussion questions and engage in conversations to elicit prior knowledge and higher-order thinking. In addition, practitioners should provide instructional scaffolds as needed. One example of this is using sentence stems rather than discussion questions for students who need additional support. Figure 2 provides an example lesson plan that can serve as a model for practitioners to follow as they develop their own materials and understand how to use those materials effectively.

Component 2: Fluency Instruction

Fluency interventions allow students the opportunity to develop reading skills that promote both accurate reading and appropriate pace with text understanding (Kamps et al., 1994). The relationship between fluency and reading comprehension has been well established in the literature (Fuchs et al., 2001) and students with HFASD are described as benefiting from oral reading fluency practice (see Whalon, 2018). The benefits of fluency intervention are based on the idea that when students demonstrate appropriate speed with word recognition and proper use of punctuation, readers free up cognitive resources to attend to the meaning of text rather than using cognitive effort to decode words (LaBerge & Samuels, 1974). This allows students to focus on comprehending what they are reading. Fluency outcomes may vary based on ASD characteristics. However, results from research studies report that students with ASD can increase the number of words read correctly on timed readings (Reisener et al., 2014). In addition, improved fluency has also shown to increase in comprehension questions answered correctly among students with ASD (Hua et al., 2012; Kamps et al., 1994).

There are several ways to provide repeated reading instruction as a fluency intervention including the following: (a) choral reading with another student, teacher, or audio recording; (b) previewing the text through listening to a peer or teacher model reading; (c) repeated reading based on a set criterion of repetition (e.g., 4 rereads); (d) repeated reading with a set criterion of words read per minute or words read correct per minute; or (e) repeated reading with error correction methods (Guthrie, 2017). Also, corrective feedback should be provided by (a) prompting students to decode the word (i.e., sound out the incorrectly read word) and asking the student to reread the sentence, or (b) modeling the correct word and then prompting the student to repeat the word in isolation or reread the sentence where the error occurred (Guthrie, 2017).

Developing fluency in students with HFASD. The procedures of fluency instruction should follow an "I do, We do, You do," explicit instruction teaching routine. The routine should include model reading by a practitioner with correct punctuation and expression, the practitioner and student working together with guided practice, followed by an opportunity for the student to complete oral reading independently. Additional scaffolding can be provided through corrective feedback, additional modeling, and repetition. For example, additional repetition may be needed when the student reads the passage with an 85% accuracy rate versus a 95% accuracy rate (Kuhn & Schwanenflugel, 2008). To illustrate, the instructional routine is as follows: (a) model fluent reading while the student listens; (b) prompt the student to read the passage aloud; (c) provide corrective feedback; when an error is identified, stop the student, provide the student with the correct word, and then have the student repeat the correct word and continue reading; and (d) prompt the student to reread the passage aloud.

Fluency interventions for students with HFASD can also include a focus on developing prosody. Incorporation of explicit prosody instruction during fluency instruction focuses on three elements: phrasing, syntax, and expression (Danne et al., 2005). Prosody does not in itself promote comprehension of text but is rather seen as a tool that aids in the production of fluency (Rasinski et al., 2009). The prosody instructional routine is as follows: (a) introduction of lesson focus (e.g., commas, periods, exclamation point); (b) modeling of fluent reading with accurate expression while the student listens; (c) asking the student to notice how the teacher reads the targeted punctuation; (d) asking the student what aspects of the teacher's model reading were apparent; (e) modeling reading the text again; and (f) instructing the student to read aloud and pay attention to the targeted punctuation. Figure 3 provides an example prosody lesson plan. The lesson provides explicit instruction for the use of periods while including model reading to demonstrate proper use of syntax, phrasing, and expression. Following implementation of the prosody intervention, the fluency intervention as previously described is administered (i.e., repeated reading with teacher model reading or choral reading followed by independent reading).

Component 3: Comprehension Instruction

Reading comprehension interventions for students with HFASD include cognitive strategy instruction, such as the use of question–answer relationship (QAR) and main idea-summarization interventions (Accardo, 2015; Chiang & Lin, 2007; El Zein et al., 2014, 2016; Finnegan & Mazin, 2016; Senokossoff, 2016; Whalon et al., 2009). These interventions have resulted in increased frequency of question generation (Whalon & Hanline, 2008) and positive outcomes on measures of reading comprehension among students with ASD (e.g., Hundert & van Delft, 2009; Reutebuch et al., 2015). During QAR, questions are generated and asked by instructors in several formats: (a) "right there," (b) "think and search," or (c) "wh-" questions (i.e., who, what, when, where, why, and how). Right there questions indicate that the answer can be found word-for-word in one sentence of the passage, whereas think and search questions are answered from information in more than one sentence of the passage and combined to generate one sentence. Teaching students specific procedures to develop and answer these types of questions requires students to summarize information and may promote comprehension monitoring (Hua et al., 2012; Whalon & Hanline, 2008).

While QAR is one type of instructional strategy, strategies for identifying the main idea and summarizing that

Prosody Lesson Plan		
Student Objectives	**Component**	**Duration**
• Students will be able to demonstrate accurate use of punctuation while reading • Students will be able to demonstrate proper use of syntax, phrasing, and expression	**Materials:** • Teacher and student copies of reading passage **Instructional Procedures:** **1.** Introduce lesson focus—see sample script **2.** Model fluent reading while the student listens. Ask the student to notice how you are reading the targeted punctuation. **3.** Ask the student what they noticed with teacher model. **4.** Model reading the text again. **5.** Have the student read aloud and pay attention to the targeted punctuation **Sample Script:** • Now we're going to practice reading aloud. When we read, it's important to pay attention to the punctuation in the sentence. What are some examples of punctuation marks? • That's right. Periods, commas, question marks, and other punctuation marks help us when we're reading. They give us clues about how to read and understand the text. • Listen to me read this short passage and notice what I do when I see a period. • What did I do when I saw a period? • That's right. When I'm reading and see a period, I know that I need to pause, or stop reading for just a moment. This helps me understand that the period is ending a sentence. The next sentence is a different idea. • Now I'm going to reread the sentence. Notice how I pause for periods. • Now would you please try to read it aloud and pause at the periods? • Great job. When we're reading the longer passage in just a minute, pay close attention to the periods and make sure you include a little pause.	**5–7 min**

Figure 3. Prosody lesson plan example.

information have shown themselves to be a promising approach for students with HFASD (El Zein et al., 2014). Students are taught to identify the most important who or what in the passage and the most important thing about that who or what, and those two pieces of information are then combined to generate a main idea statement (El Zein et al., 2016). Although this strategy promotes reading comprehension outcomes in students with HFASD, we suggest that it is best utilized within a multicomponent intervention (e.g., Kamps et al., 1995; O'Connor & Klein, 2004). Main idea-summarization interventions are commonly featured parts of multicomponent reading comprehension interventions, which integrate essential components of reading (e.g., Solis et al., 2018). Promising evidence suggests that when explicit main idea-summarization interventions, with appropriate questioning strategies, are taught to students with HFASD, that reading comprehension performance is enhanced (e.g., Åsberg & Sandberg, 2010; Solis et al., 2019). As such, the multicomponent reading intervention incorporates vocabulary and fluency interventions and a main idea-summarization intervention.

Teaching sentence and paragraph level comprehension. Our sentence and paragraph comprehension development activities have two components. First, after completing fluency activities, we recommend that students engage in a "Does it Make Sense?" (DIMS) activity, which focuses on paragraph and sentence level understanding. We included this intervention component to provide an additional opportunity for sentence level comprehension development. The DIMS activity has shown to improve reading outcomes for students with reading difficulties (Miciak et al., 2018; Solis et al., 2018) and previous studies of the QuickReads passages provide evidence of effectiveness for struggling readers (Vadasy & Sanders, 2008), including students with HFASD.

Figure 4 provides an example of a DIMS lesson plan. A DIMS lesson includes reading the title of a passage and a QuickReads program passage itself (Hiebert, 2003). Following the reading, the student indicates whether or not specific sentences make sense. Various sentences from the passage are pulled from the passage, with some sentences altered. When engaging in this activity, for each item, the instructor (a) has the student read each statement to themselves; (b) has the student circle "yes" if a statement makes sense or "no" if it does not; (c) has the student underline words that provide clues that the statement did not make sense if the student answered no; and (d) discusses all answers, engaging in a conversation regarding their reasoning for each statement.

Second, we recommend practice with a main idea summarization lesson, "get the gist," that was adapted from Collaborative Strategic Reading (Klingner & Vaughn, 1999). QuickReads passages were used during intervention and

Fluency with Text Reading and DIMS Lesson Plan		
Student Objectives	**Component**	**Duration**
• Students will increase reading rate through a process of repeated reading • Students will be able to identify accurate statements based on the information from text	**Materials:** • Teacher and student copies of reading passage • Timer • DIMS worksheet **Preparation:** • Prepare DIMS Make Sense worksheet **Fluency Instructional Procedure:** **1.** Begin with teacher model reading while the student listens ○ *Option:* choral read with student **2.** Instruct student to read the passage out loud ○ Record the amount of time spent reading passage. When the student reads the first word in the passage, start the stopwatch **3.** Provide corrective feedback ○ If the student does not read a word within 3 seconds or makes an error, provide the word and make note of missed word. Mark errors with a slash through the incorrectly read word (including substitutions and omissions) **4.** After student finishes reading the passage ○ Instructor will go through and teach all missed words **5.** Student rereads passage ○ Instructor records time spent reading **DIMS Instructional Procedure:** **1.** Distribute worksheet **2.** Have student read the statements, circling "yes" if a statement makes sense or "no" if it does not **3.** If student circles "no," instruct the student to underline the words that provided clues that the statement did not make sense **4.** Discuss answers and reasoning with student	**20–25 min**

Figure 4. Fluency lesson plan and DIMS activity.
Note. DIMS = Does It Make Sense.

specific prompts were used to help students identify the main idea about the passage. When developing student skill in finding main ideas in text, teachers can utilize right there or think and search questions to guide the development of gist statements. During main idea summarization interventions, students read a selected passage, identify the most important who or what and the most important idea about that who or what in the passage, and then generate a main idea statement of 10 to 15 words that summarizes the passage.

Our adaptation of the get the gist main idea generation also included further scaffolding through use of a text-based approach to intervention. With a text-based approach, students are taught to refer back to text, reread restricted portions of text, and the teacher provides scaffolds with modeling and the use of right there or think and search questions to develop main idea statements. Passages for intervention were adapted from Newsela (https://newsela.com). The instructional routine is as follows: (a) prompt the student to read the text; (b) use right there and think and search question stems and prompt the student to formulate a main idea statement; if the student does not provide a response, then instruct the student to reread the text; (c) if no response is provided following an opportunity to reread the passage, then instruct the student to refer to one paragraph and then re-ask the question; and (d) if the student continues to struggle, then have the student look at one specific sentence or word to identify the answer. Question stems for scaffolding include the following prompts: (a) what are some important ideas in this text? (b) I see this important idea; can you name one? and (c) tell me the (two/three) most important ideas in this section/text. Teachers do not tell students answers. Ultimately, students are expected to independently find and support their answers with text content. The instructional routines for get the gist and text-based interventions are illustrated in Figure 5 as an example lesson plan.

Behavioral Considerations

While it is vital to focus on the identification and implementation of evidence-based reading interventions, it is equally important to consider and effectively address the behavioral challenges posed by students with HFASD. Due to the heterogeneity of ASD and the interactive relationship between behavior and reading, an integrated system may

Comprehension Lesson Plan		
Student Objectives	**Component**	**Duration**
• Students will be able to identify the main idea of the text • Students will be able to develop accurate responses to "right there" and think-and-search questions	**Materials:** • Teacher and student copies of reading passage **Instructional Procedures:** ***Get the Gist procedure:*** **1.** Present the passage and engage in a discussion about the title of the passage **2.** Model read, choral read, or instruct the student to independently read the passage **3.** Model how to identify the most important who or what, the most important information about that who or what, and combining the responses to develop a main idea statement **4.** Instruct the student to read the passage independently and identify the most important who or what, the most important information about that who or what, and develop a main idea statement or gist ***Text-Based procedure:*** **1.** Prompt the student to read the text **2.** Use "right there" question stems and prompt the student to formulate a main idea statement ○ What are some important ideas in this text? ○ What are some of the most important ideas in this section? **3.** If the student does not provide a response, instruct the student to re-read a larger section of text and provide scaffolds as needed ○ If no response is provided following an opportunity to re-read the passage, then instruct the student to refer to one paragraph and then re-ask the question ○ If student continues to struggle, then refer the student to look at one specific sentence or the word to identify the answer	**15 min**

Figure 5. Comprehension main idea identification lesson plan example.

enhance students' performance. For instance, practitioners may consider integrating both school-wide and classroom supports already identified and in place for students and use positive approaches to encourage appropriate behavior. Throughout the implementation of reading interventions, we suggest that practitioners include the following recommendations in their practice: (a) teach behavioral expectations by modeling them and having students practice appropriate behaviors on a consistent basis; (b) model, acknowledge, and reinforce appropriate reading behaviors; and (c) use a continuum of strategies to acknowledge appropriate behaviors and respond to inappropriate ones. The use of token economies and instructional support materials such as visuals and checklists are suggested as successful techniques for students with ASD (Accardo, 2015). For instance, a visual checklist can be developed to show the various intervention components the students will work through in a given lesson. Visual supports provide information about expectations and directions while token economies provide immediate conditioned reinforcement (Adcock & Cuvo, 2009; Heflin & Alberto, 2001). Similarly, graphic organizers act as visual supports when teaching students with ASD and have the potential to facilitate organization and integration of text information. The theory Weak Central Coherence describes a detail-focused processing style and suggests that students with ASD may focus on details and individual words rather than main ideas making it difficult to understand the "whole picture" (Happé & Frith, 2006). While a second theory, Executive Dysfunction Theory, suggests that deficits in executive functioning (e.g., attention, organization, planning, and self-monitoring) may limit the ability of students with ASD ability to integrate and organize new information and monitor understanding (Carnahan et al., 2011). The use of graphic organizers could potentially influence deficits associated with the aforementioned theories, provide beneficial scaffolds supporting reading instruction, and proactively address off-task behaviors. As practitioners learn and effectively implement the reading interventions discussed in the article, these behavioral suggestions can be embedded in the instructional routines and curriculum.

Conclusion

With the unique needs and characteristics that students with HFASD demonstrate, it is important to identify interventions that have been shown to work for this population. The multicomponent intervention that was described in this article included explicit vocabulary instruction of academic words, fluency instruction with a prosody component, sentence level comprehension instruction with the DIMS activity, and the text-based strategy for passage level comprehension instruction that included identification of main ideas. The intervention aims to promote reading comprehension performance among students with HFASD in grades 4 to 8 when remediation of skills is targeted.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research was supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R324A160299 to the University of California, Riverside. The opinions expressed are those of the authors and do not necessarily represent the views of the Institute or the U.S. Department of Education.

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