Helping Students with Dyslexia Learn *How to Learn* from Written Texts

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Abstract

While students with dyslexia typically demonstrate average to above average language comprehension skills, they often struggle with reading comprehension and more broadly, with learning from written texts. The most obvious reason for this is due to their weaknesses in decoding/word recognition – if you cannot read words accurately and efficiently, comprehension and learning will be affected. Less obvious reasons for difficulties with learning from texts can include subtle deficits in higher-level language comprehension skills as well as deficits in attention, working memory, and understanding and use of metacognitive reading strategies. Without question, students with dyslexia need to receive research-based intervention to target improvement in their word reading skills, but they also need skills and strategies for comprehending and learning from their grade-level texts in order to compete in post-secondary and professional contexts with their same-aged peers. Assistive technologies offer one way in which students can access their curricular content, but as students move into middle and high school (and even into college) students need to be strategic about what, how much, and for what purpose they are reading. These students need to be armed with skills and strategies for managing their reading demands while also learning the curricular content. This article will focus on six metacognitive reading comprehension strategies – the 6 Ps – that can help students with dyslexia manage large volumes of text, increase their engagement with texts, and learn deeply from texts.

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Learning Objectives

1) State how theoretical models of reading comprehension should be applied to assessment of reading comprehension.
2) Explain the 5S's of Intervention
3) List metacognitive reading strategies described in the 6P's

Dyslexia Defined

Both the International Dyslexia Association (IDA) and the National Institute of Child Health and Human Development (NICHD; 2014) are currently using the following to define dyslexia:

> ***Dyslexia is a specific learning disability that is neurological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.***

For clarity, this current definition will serve as the framework for this paper. However, while this article addresses how students with dyslexia can be taught how to learn from written texts, there is empirical and

theoretical evidence that the methods reported herein can be applied to students with generalized reading disorders, language-based learning disabilities, and/or attention deficit hyperactivity disorder.

Reading Comprehension: Essential but not Sufficient

The act of making meaning out of written text is a complicated process; it involves the integration and management of a variety of skills – cognitive, linguistic, and metacognitive (see Adams, 1990; Cromley & Azevedo, 2007; Cutting & Scarborough, 2006; Gough & Tunmer, 1986; Kintsch, 1994; Perfetti, 1985).

In their simple view of reading, Gough and Tunmer (1986) proposed that reading comprehension is the product of two distinct skills: decoding and linguistic comprehension. They further argued that when an individual demonstrates good linguistic comprehension, but poor decoding, the result is a profile consistent with the diagnosis of dyslexia. In other words, the breakdown in reading comprehension is thought to be due to difficulty with deciphering the words on the page; it is not due to a generalized difficulty with oral language comprehension. That said, the simple view of reading is simple; it captures only two skill areas that are important for good reading comprehension. For example, the simple view does not account for the breadth and depth of prior knowledge that the reader brings to the task of reading; cognitive processes such as attention and working memory; and metacognitive and metalinguistic processes, such a comprehension monitoring, purposeful reading, and meaningful reflection.

We have known for decades that children classified as learning disabled (LD) and/or as poor comprehenders have also demonstrated limitations in their metacognitive skills during reading compared to same-age skilled readers (Brown, 1980; Garner & Kraus, 1981-82; Palincsar & Brown, 1987; Stone & Conca, 1993). Palincsar and Brown (1987) noted that compared to good readers, poor readers do not see reading as a search for meaning, there is a greater emphasis on decoding; they do not monitor; they do not engage in strategies when there is a breakdown in comprehension; and they do not modify their choice of strategy to meet the task demands (p. 69). Stone and Conca (1993) stated, "…as a group, children with LD recruit fewer strategies spontaneously and use strategies less often than same-age nondisabled peers." (p. 24). Perfetti and Hogaboam (1975) suggested that limited strategy use in poor decoders was secondary to their lack of automaticity in basic reading, thus preventing them from devoting their attention to higher-level processes. In fact, individuals with dyslexia have been found to exhibit much more brain activity

The importance of these cognitive and metacognitive skills was taken into account in a model of adolescent reading comprehension developed by Deshler and Hock (2007). This model goes beyond the simple view by illustrating how certain reading skills (i.e., phonological awareness, decoding, sight word reading, and fluency), language comprehension (i.e., background knowledge, syntax, vocabulary, and text structures), and executive processing skills (i.e., cognitive and metacognitive strategies) work together to bring about successful reading comprehension. While this model was developed with adolescents in mind, we know that use of metacognitive reading strategies by children with dyslexia and/or LD is beneficial to their reading comprehension skills (see Camahalan, 2006; Chan & Cole, 1986; Graves, 1986; Pressley, Goodchild, Fleet, Zajchowski, & Evans, 1989; Schunk & Rice, 1992).

Still, while reading comprehension is of critical importance as students' progress through their school-age years and beyond, it is not enough. Students must be *learning* from the texts that they read (see Kintsch, 1994, 1998, 2005). The knowledge that students accumulate over time must be retained and then integrated with new knowledge that they come to acquire through both spoken and written modalities. Therefore, students must acquire the skills and strategies needed to learn from their texts, and for students with dyslexia, who struggle with word reading efficiency, these skills need to be directly and explicitly taught and practiced.

Developing an Intervention Plan

The first step in developing a treatment plan is the assessment. Whether assessing a student who is dyslexic or not, speech-language pathologists (SLPs) must conduct careful and comprehensive assessments when trying to identify the factors contributing to a student's difficulties with reading comprehension. Assessment should drive treatment, and SLPs have a responsibility to seek the answers to *why* their students are struggling with reading comprehension (Katz & Fallon, 2015). A weak score on a reading

comprehension measure does not tell us *why* the student is struggling – we need to examine word reading, spoken language comprehension, and use of metacognitive reading strategies. Katz and Fallon provide a detailed discussion on how best to assess students who are struggling with reading comprehension – from the skill areas to examine, the measures to use, and the qualitative information and data to take into account.

Once you have your data and an understanding of *why* it is that the student is struggling with reading comprehension, and learning more broadly, a plan of intervention should be developed. Katz and Fallon (2015) and Fallon, Katz, and Carlberg (in press), present a framework, and an expanded framework, of balanced intervention, respectively. In the most recent model, the 5S's of Intervention, five essential components of intervention should be considered in developing an intervention plan: *skills*, *strategies*, *school*, *student buy-in*, and *stakeholders* (see Figure 1).

Figure 1. Planning Balanced Intervention: The 5S Framework.

Skills	○ Foundational language & literacy skills
Strategies	○ Application of skills to content learning & academic assignments ○ Work in in partnership with the school
School	○ Intentional use of metalinguistic & metacognitive skills
Student Buy-in	○ Motivation & engagement
Stakeholders	○ Parents/guardians, spouses, siblings, friends, tutors, counselor, teachers, etc.

Katz & Fallon (2015), Fallon & Katz (in press)

For the *skills* component, explicit, systematic, and direct instruction in identified areas of weakness (e.g., phonological awareness, decoding, higher-level language comprehension) is paramount. Students, however, also need to be equipped with *strategies* so that they can learn how to learn and therefore become independent learners. Despite continued difficulty with efficient decoding or word recognition in their grade-level texts, students with dyslexia still need to access the content of these tests. In addition, as these students advance through their school career, they will need to be able to do so with greater efficiency as the amount and the complexity of the text continue to increase.

These skills and strategies need to be taught in the context of where students spend the bulk of their time engaged in literacy tasks: *school*. As much as is possible, therapeutic materials and methods should be relevant to the student's academic content and requirements, and whenever possible, cooperative and collaborative relationships between the clinician and key school personnel should be developed. Particularly as students become older, but even in the younger years, taking care to establish a good rapport and develop *student buy-in* can be an important contributor to a student's success with language therapy (Dickson et al., 1998). Finally, students are not yet independent beings, and particularly for those with LD, they often need and rely on support from key *stakeholders* (i.e., parents, siblings, and tutors).

Depending upon the particular student with whom the clinician is working, there may be more emphasis on one or some 5S's than on others. For example, consider a student with dyslexia whose decoding and word recognition skills are average but inefficient. While he can read the words in his grade-level texts, it takes him too long to get through all of his class assignments and readings, and he is struggling to comprehend and learn from his texts. While he has tried to use text-to-speech software to access the curricular content, there is not enough time to get through even half of what he is supposed to read. He is only in 6th grade, and he still has the remainder of middle school and high school to go. Moreover, he is bright; he wants to go to college and eventually, he would like to pursue a career in medicine.

Focus on Metacognitive Strategy Instruction

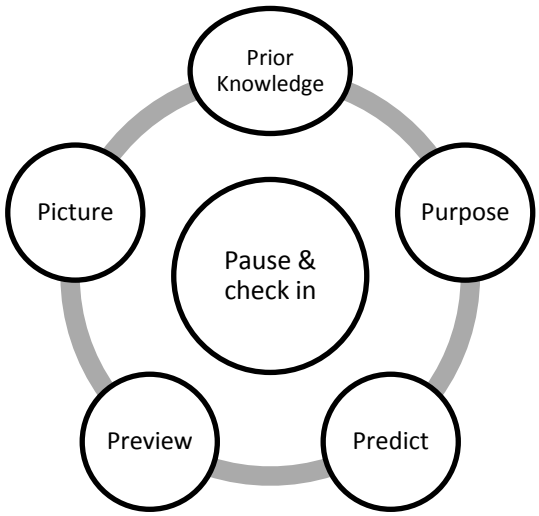
In the example above, while this student may continue to benefit from intervention targeting his word reading skills, to thereby improve his reading efficiency, it seems that he might also benefit from some strategies to help increase his comprehension of and learning from written texts. Like many adults with dyslexia, this student may never become an efficient word reader (Shaywitz, 2003), but he has the potential to become a more efficient and, even highly proficient in comprehension for learning.

Reading comprehension strategies have been categorized in a variety of ways. Strategies have been grouped according to *when* they occur in the reading process (see Klingner, Vaughn, & Boardman, 2007). For example, reading comprehension strategies can occur *before* reading the text even begins and might include setting a purpose for reading; previewing the title, headings, subheadings, bold words; and activating one's prior knowledge about the topic. *During*-reading strategies might include keeping a purpose in mind, making predictions about what might come next, self-generated questioning, and stopping to summarize. Finally, *after*-reading strategies are carried out once the reading is complete, and they might include summarizing, reflecting on what was learned, and answering questions.

Strategies have also been organized by type or function (see Carlisle & Rice, 2002; Mokhtari & Reichard, 2002). Carlisle and Rice classified reading comprehension strategies into four groups: *preparatory*, *organizational*, *elaborative*, and *executive*. Preparatory strategies are akin to pre-reading or before-reading strategies; organizational strategies include finding the main ideas, summarizing text, and identifying the text structure; elaborative strategies involve deriving meaning from the text that goes beyond the words on the page (e.g., making inferences, connecting the content with prior knowledge); and executive strategies are those that require monitoring of one's own comprehension and deciding how the task should be approached and completed. Mokhtari and Reichard (2002) developed the Metacognitive Awareness of Reading Strategies Inventory (MARSI), which categorizes 30 reading comprehension strategies into three categories: a) *global strategies*, b) *problem-solving strategies*, and c) *support strategies*. Global reading strategies are used for grasping the big picture (e.g., the author's purpose, main idea, and overall theme(s)). Problem-solving strategies are used when the text becomes challenging to read and comprehend. Foremost, students must be able to identify a breakdown in their comprehension and then, to fix the breakdown, they must know which strategies to use and how to use them (e.g., adjusting reading rate, reading out loud, rereading if necessary). Finally, support reading strategies that require resources outside of the text itself (e.g., taking notes while reading, underlining, paraphrasing, using outside reference materials, and discussing the readings with others) may be perceived as unnecessary extra work by students.

In our research and clinical work with school-age and college students, we have identified a set of six effective reading comprehension strategies that are particularly useful for increasing efficiency, enhancing engagement, identifying the central meaning(s) and message(s) found in a text, boosting understanding and connections with prior knowledge and knowledge that is yet to come, and improving learning more broadly, not just comprehension. The 6 Ps are as follows: *prior knowledge*, *purpose*, *predict*, *preview*, *picture*, and *pause to check in* (see Figure 2). While prior knowledge is often a good place to begin, these six strategies are not meant to be used in a set sequence; rather, they are meant to be used recursively throughout the reading process. In the sections that follow, we will describe each strategy in detail.

Figure 2. The 6 Ps.



Prior Knowledge

The activation of one's prior knowledge involves thinking about what one already knows about the subject matter of the text that is about to be read. This strategy need not take a large amount of time, yet this largely depends on the amount of prior knowledge a student brings to the task. When students face a topic they know nothing about, conducting a quick search on-line can give them just enough information to help them engage with the text in a more meaningful way (see Pressley & Gaskins, 2006). Making this very small investment of time up-front can pay-off tremendously. Students with dyslexia and other LDs often resist doing

anything that requires extra time or effort that is not obviously counting towards completion of the task (e.g., reading the chapter). Convincing your students that this initial investment is worth the time and effort can take time, but when they see for themselves that they are more engaged and focused, and ultimately comprehending with greater ease, they will come to appreciate the value. Therefore, before actually reading any paragraphs or turning any pages, students should begin the reading by thinking about what they already know about the topic. They can use the title, a picture on the cover page, or the teacher's earlier coverage of the subject matter to help stimulate some thoughts about the subject matter. They can ask themselves the following questions: What do I know about this topic? If I don't know much/anything, where can I find some information? How is what I know possibly related to what this text is going to be about?

Purpose

Students should always approach reading with a purpose in mind. Determining the purpose will help students to read texts in a more meaningful way, which in turn, will provide greater focus and efficiency. When we read for pleasure, generally, our purpose is not to remember every detail; we may just want to understand the plot and be entertained. With school (or work-related) readings, our purposes vary. During the school-age and college years, teachers and professors are generally the individuals who determine the purpose for each given reading. Students need to be aware that one of their jobs as students is to determine what the teacher intends for them to gain from the assigned reading. Sometimes, the teacher is explicit about this – "I want you to focus on the reasons why the war began." Sometimes the teacher is explicit, but in a different way – "After you read the chapter, you will need to answer the summary questions on the last page." Sometimes the teacher is not explicit, but does have a purpose that can be identified. This usually involves some detective work (e.g., making note of the kinds of discussion points raised in class, consulting study guides, noting the kinds of questions asked on quizzes and tests). Students should come to understand that different teachers have different views and beliefs about what is important. Depending on the teacher and the subject matter, a student may need to attend to specific dates of events, names of people and places, vocabulary terms, main ideas/themes, connections to their own experiences, or lessons learned. Teachers and professors are not always the purpose-setters – when students are engaging in research-like activities, their purposes may come from their own research questions or topics. For example, if a student is writing a report about the kinds of foods that are eaten in Mexico, they would not want to allocate careful (or any) attention to paragraphs of text about currency, crime, language, or climate – they would stay connected to their purpose before and throughout the reading process.

A reader's purpose should also be driven by his/her awareness of and familiarity with different text structures. For example, narrative texts are structured very differently than expository texts. When one prepares to read a narrative, he/she should anticipate a narrative or story structure: a setting, characters, a problem, some events/actions that occur in an effort to solve the problem, a climax, and some sort of resolution. In contrast, expository texts do not include these components, and there are also many different expository structures (e.g., descriptive, procedural, informational, persuasive, compare/contrast, etc.). For example, in a descriptive structure, the reader should expect to learn about how something, someone, or some place looks, sounds, feels, smells, and/or tastes. In a procedural text, the reader should expect to learn how to do something; key information might include the materials/equipment/people needed, the steps or processes involved, the sequence of steps to follow, the time involved to complete the procedure, and the expected result.

The following questions can help guide students to determine their purpose (or purposes) before and throughout the reading process: What kind of text is this (narrative, procedural, descriptive, etc.)? What does your teacher want you to know? Why is your teacher asking you to read this? What am I going to need to do after I read this (class discussion, paper, quiz, etc.)?

Predict

Making predictions before and throughout the reading process is another valuable strategy for increasing one's attention and engagement while reading. Readers who make predictions as they read are *active* rather than *passive* participants in the reading process. Regardless of whether or not our predictions are right, as curious (and competitive) beings, we will seek to know whether our predictions are right or wrong, and this keeps us

focused and engaged. While making predictions may lend itself more naturally to narrative texts (e.g., predicting what a character will do or what will happen to a character), it can also work with expository texts (e.g., Photosynthesis probably has something to do with light..). When students are reticent to make predictions or when they believe they don't have any predictions to make, it can be helpful to have them make "I wonder" statements (e.g., I wonder what will happen next.. I wonder what photosynthesis is.).

The following questions can help guide students in making predictions throughout the reading process: What does the title suggest this is going to be about? If this is a narrative, what do I think is going to happen next? If this is an expository text, what do the headings and subheadings suggest? Am I making "I wonder what…" statements?

Preview

Because reading can be such an effortful and time-consuming activity for students with dyslexia, and because reading demands only continue to rise as students' progress through and beyond their school-age years, they need to begin to learn how to succeed without reading every paragraph they're assigned. This is something that many skilled readers learn how to do without being explicitly taught how to do so (Pressley & Afflerback, 1995), and students with dyslexia actually need to have this skill to manage the volume of reading they will face in high school and college. We've referred to this skill as 'reading without reading' – the idea being that you don't need to read everything on the page or in the chapter to learn and understand the content. In addition to improving efficiency, previewing text does something quite significant for these students: it helps them see the big picture rather than a never-ending list of isolated details, which is something with which these students tend to struggle (Carlisle, 1999; Hansen, 1978). By initially skipping over the details and getting the overall picture, these students can start to make connections not only with information contained in one piece of text, but information contained across several different pieces of text. For example, instead of trying to remember something about slavery, something about the Battle of Gettysburg, something about Abraham Lincoln, something about the 13th Amendment, and something about Robert E. Lee, they can start to see that all of these things were related in time and place and in the context of the Civil War.

So, how can students be taught to preview or 'read without reading?' With narrative texts, previewing might include reading the back cover of the book, reading reviews or a summary of the book, reviewing the table of contents, or briefly examining other works by the author. With expository texts, while incorporating some of the previously discussed Ps (i.e., activation of prior knowledge, keeping a purpose in mind, making predictions throughout the reading process), students should be taught to read and think meaningfully about the title, headings, subheadings, figures, tables, pictures, maps, and bolded words. They should start the chapter or article by asking themselves, "What does the title mean? How does the title relate to what I've learned in class? How does the title relate to my own knowledge/experiences?" From there, they should ask themselves, "What do the headings mean? How do the headings relate to the title? How do the headings relate to what I've learned in class? How do the headings relate to my own knowledge/experiences? What do the bold/italicized words mean? How do the bold/italicized words relate to the heading? How do the bold/italicized words relate to the title? How do the bold/italicized words relate to what I've learned in class? How do the bold/italicized words relate to my own knowledge/experiences?" Once they've previewed the text, they should return to their purpose to identify which sections may need to be more carefully read. While there will be times that they'll need to go back and read more of the text, sometimes previewing will give them enough information to get a general sense of the material and participate in an in-class discussion the next day.

Picture

While research has been mixed regarding the effectiveness of picturing or visualization strategies during reading, there may be some value in using imagery strategies to increase students' engagement during reading (Long, Winograd, & Bridge, 1989) as well as their retention of information in long-term memory (Baddeley, Grant, Wight, Thomson, 1975; Oakhill & Patel, 1991; Sadoski, Goetz, & Fritz, 1993). Research has shown, however, that converting meaning derived from written text into visual images in one's mind can be particularly useful with concrete information and with narrative structures (Sadoski et al.; Weisberg, 1988). With expository structures and content-area readings, students should be encouraged to use

picturing strategies in a different way – connecting information in the text to personal experiences that are picturable. For example, in the context of a chapter on the Civil War, recalling images of a family visit to the Lincoln Memorial in Washington, D.C. during which a tour guide remarked about the size of the sculpture relative to how important Lincoln was in the abolishment of slavery when the country was so divided.

For narrative texts, questions or prompts that students can use to guide them in the picturing process might include the following: What do I see? What do I hear? What do I feel (heart and hand)? Are there any smells, tastes that are important to capture? For concepts, places, people, and events in expository texts, students might ask themselves: What experiences can I picture that will help me understand or remember this piece of information? Clinicians can also teach students to utilize self-drawn diagrams and graphic organizers to help themselves visualize, understand, and remember relationships between concepts or people, or sequences found within the both narrative and expository texts.

Pause to Check In

While skilled readers monitor their comprehension throughout the reading process, students with dyslexia and other LDs are less inclined to do so (Baker, 1984). Skilled readers not only stop periodically to monitor whether they are comprehending what they are reading, but they then act when necessary to ensure comprehension (Wilhel, 2008). For example, if they find themselves not attending to the text, they may reread the section wherein they were distracted, or they may stop to take a break and then return to reading when they are more alert. If we don't pause to check in on our comprehension of information than we are liable to miss important information.

Students can use the following prompts to serve as reminders to pause and check in during reading:

- Remind yourself of your purpose.
- Make frequent predictions and reflect on your accuracy.
- Ask yourself what the sentence, paragraph, page, passage was about, and actually answer!
- Ask yourself what you are learning, and actually answer (by paraphrasing)!
- Ask yourself if the text is making sense. If not, do something about it.
- Find main ideas and summarize frequently.
- Ask yourself if you are paying attention. If not, do something about it.

Two Case Descriptions

The following two case descriptions are based on several real clinical cases seen by the first author. The names and details have been changed, but the goals, methods, and outcomes are genuine. For coherence, the cases have been written in first person.

Dylan

Dylan was a 12-year old female with a diagnosis of dyslexia. She had a classic profile – above-average language comprehension skills and relatively weak word reading skills. While her word reading accuracy was solid, she was not an efficient reader, and this inefficiency impacted her reading comprehension, her learning, and her academic performance across most content areas, but particularly language arts. Coupled with her dyslexia diagnosis was a diagnosis of ADHD, which reportedly impacted her ability to stay focused when completing lengthy reading assignments, and primarily when reading fictional books that she found to be uninteresting. Otherwise, Dylan was a successful student – she had a lot of friends and was a gifted athlete.

Using the 5S Framework for Balanced Intervention, together, we developed goals and objectives around improving her reading comprehension skills and academic performance in language arts. Our plan was to work 1 hour per week for a month to see if Dylan might begin to experience some improvement. For Skills, the focus was on increasing her familiarity with narrative structures. For Strategies, where the bulk of our attention was placed, the focus was on improving Dylan's understanding and use of the following reading comprehension strategies: activating prior knowledge, predicting, reading with a purpose, picturing, and pausing to check in. Of note, the only P strategy that was not being taught was previewing, and this was because fictional novels do not lend themselves to previewing in the way that textbook chapters do. For School and Student Buy-In, her language-arts' novel served as the intervention materials; this meant that therapy was going to be academically relevant, and she was more than happy to engage if we were going to be

reading something that she had to read anyway. Finally, her mother watched the sessions from behind a one-way mirror so that she could reinforce the taught strategies at home. As an aside, when parent observation is not feasible, connecting via email or phone to report on what has been taught and offer suggestions for how parents (or tutors) can follow-up at home can be effective as well.

For the first session time was spent talking about narrative structures. While much of what was discussed was familiar to Dylan (i.e., setting, characters, resolution), the components weren't something that she thought about when she approached or read a narrative text. To help make these components more salient, we worked with a stack of pre-school books that were fast-reads and that had very salient narrative structures. We basically spent the hour reading these books and identifying the settings, characters, problems, events/actions that occur as an effort to solve the problems, climaxes, and resolutions. By the end of the hour, Dylan could independently identify these components in the pre-school books, but could also reflect back to the last two fictional novels she had read for school and identify these components in those texts.

For the second session, Dylan brought the novel she was required to read for her language arts class: *Watership Down* by Richard Adams. She had started reading the novel, but was finding it painfully boring and was reportedly unable to engage at all with the story. I prepared for the session by reading the *SparkNotes* (http://www.sparknotes.com/) summaries for the book and by reading the prologue and first two chapters of the book. I gathered some baseline data by asking Dylan to provide a summary about what she had read in the first two chapters. Dylan was only able to say that it was a book about rabbits who talked. This is true; it is an anthropomorphic story wherein the main characters are rabbits who can speak and think like humans but were otherwise just ordinary rabbits.

I took a few minutes to talk with Dylan about trying something new – investing a little bit of time before actually starting to read her book, so that she read with more focus, engagement, and even enjoyment. Dylan agreed, and I laid out what I had done to help increase my own engagement with the story. First, I told Dylan that I had read the summary of the book on SparkNotes to gain a big picture of the storyline. Second, I explained that I read the prologue, which included information about the author and how he came to write this story – it was based on oral off-the-cuff stories that he told his daughters in the car, and they insisted that he put them into writing. I told Dylan this made me more curious about the story as the authors' young children found it fascinating enough to encourage their father to write it down. I told her that I also learned that the author based much of the story in a place where he grew up and on his own experiences fighting in battles during World War II. And, I told her that this also piqued my interest – I wanted to know more and try to see if I could relate the story to how a real battle experience might have unfolded. Third, I talked with Dylan about activating her prior knowledge, and in the process, Dylan asked if Watership Down was a real place. We decided to run a quick search online and found that it was a hill (or a down) with a steep slope in England. Dylan talked about a childhood memory of a vacation during which she and her siblings played hide and seek on a green, hilly meadow. We also talked for a minute about World War II and what the experience of a war might be like generally. All of these discussions while seemingly irrelevant were actually activations of prior knowledge, which were beneficial in the long run. Finally, after just about 10 minutes of chatting, we were about ready to start reading.

I explained that I would take the lead and just wanted Dylan to listen and chime in if she wanted to. I had prepared to use a think-aloud approach to model my use of the 5 Ps. I started by reminding myself of our **purpose** (or Dylan's teacher's purpose): "So, I should first start by thinking about my purpose or what we need to be focusing on as we read. You have questions that we have to answer about the setting and characters, and we know this is a narrative, so we should expect that we'll also maybe learn about a problem…we'll be on the look-out for those things." Next, I read the first chapter's title ("The Notice Board") and made a **prediction**, "Hmmm…, I wonder if the board is an actual bulletin board or chalk board that contained a message of some sort. Maybe it's a message for the rabbits, or maybe a message that the rabbits will leave. Maybe it's going to tell us something about the problem. We'll see (with dramatic prosody)." Then, after a paragraph or so, I paused to reflect on the **picture** of the setting that I imagined in my mind. I also stopped to describe what I thought the two main rabbit

characters looked like: "I remember from the prologue – my **prior knowledge** – that Hazel had the qualities of an officer, so I think she's big and strong. I think Fiver is a little scrawny rabbit. I don't know why, but I think he is kind of small and nervous." I **paused** at one point because I was confused and needed to check my understanding of what I had just read: "Wait… I'm so confused. Why is Fiver freaking out and talking about a field full of blood? Oh! I remember (**prior knowledge**) – Fiver is supposedly cursed with always telling the truth but never being believed. Maybe Fiver can predict (**prediction**) what the truth will be. He says, 'There isn't any danger here, at this moment. But it's coming…' (Adams, 1972, p. 6)." Dylan and I continued reading the first chapter together in this way, and by the end, Dylan was actually excited to continue reading. She said, "You were right, there was an actual message board!" And, she spontaneously made a prediction, "I think Fiver can predict the future and there probably is danger coming their way… maybe humans!" When Dylan arrived for her next session, she was able to provide accurate summaries for chapters 2 and 3, and she reported using all 5 Ps, even providing examples of how she used each one. In only two, 1-hour sessions, Dylan had shown substantial growth in her ability to comprehend narrative texts. And, in the subsequent two sessions, Dylan and I worked to build connections between the narrative and what she had learned in social studies about battles and wars. Dylan was beginning to independently reflect on how the knowledge gathered from expository texts in her social studies class was helping her to engage with and understand the narrative, and how her reading of this narrative was helping her learn more from her social studies text about battles and wars.

Mateo

Mateo was a 15-year old male with a diagnosis of dyslexia. Like Dylan, he also had above-average language comprehension skills, but his reading skills were less strong. Efficiency was certainly a problem, but he still continued to struggle with accuracy when reading multi-syllabic words. His difficulties impacted his reading comprehension, learning, and academic performance across most content areas, but particularly in social studies and science. Mateo had also become completely dependent on his mother to help him complete his homework assignments and study for tests. This dependence had led to anxiety about his ability to get through high school without her help. Unfortunately, he was beginning to think that college was not a possibility. Studying for tests involved memorizing notecards, and the information was consistently forgotten after the test had been taken. Outside of school, Mateo enjoyed and excelled in music.

It was clear in the first session that Mateo's dependence on his mother was going to require substantial attention. When asked how he would approach answering assigned questions about his social studies chapter, he said that he would have his mother find the answers and tell him what to write. When asked what he would do if she were not available, he appeared panicked and said, "I don't know." He had no strategies for approaching his school readings and assignments. He was going to need to learn some skills and strategies, gain confidence in himself as a learner, and see that he could be successful without relying on his mother's help.

Using the 5S Framework for Balanced Intervention, Mateo's parents and I developed goals and objectives around improving his independence with social studies readings, so that over time, we might see his anxiety fade and his confidence climb. For Skills, the focus was on increasing his familiarity with informational text structures, and more specifically, his social studies text structure; this would help him read more purposefully. For Strategies, the focus was on improving Mateo's ability to not just comprehend, but to learn from his texts rather than forgetting the information after each test was taken. Moreover, he needed to learn how to *read to learn*. I planned to help him use the 6 Ps with every chapter he read. For School, in addition to making use of his curricular materials, periodic conversations with his social studies teacher ensured that we were focusing on the right information when we worked on preparing for tests. Student Buy-in was tough. Mateo was so overwhelmed with school work that he believed time spent with me was taking away from finishing his homework. We had to try to make notable gains quickly so Mateo would buy-in before giving up. Finally, Mateo's mother was an integral part of therapy. Not only was it important for her to watch what we were doing so that she could reinforce the taught skills and strategies at home, but we also had to help her stop enabling Mateo by completing his homework for him.

During Mateo's second meeting with me, he was presented with a simplified version of the goals and objectives. To help with buy-in, we set a very short-term plan: four, 1-hour sessions that would take place over 4 weeks. Using clinician-developed self-report scales, Mateo and his mother would independently rate Mateo's dependence on his mother for homework help, and each would also rate Mateo's stress/anxiety levels (see Figures 3, 4, and 5). Their ratings would help gauge progress in these areas. I then told Mateo we were going to try to read his social studies chapter "without really reading it." Mateo smiled; it was hard to be opposed to that. A timer was set so Mateo would not be able to dispute the amount of time it took us to 'read' his chapter. I took the lead and told Mateo that he should just listen and contribute when he felt comfortable.

Without explicitly introducing the 6Ps, I modeled each of them as I 'read' (**previewed**). I started by asking Mateo for the questions the teacher wanted him to answer, and before and after I read them aloud, I said, "This is what we want to be listening for – this is our **purpose**." Next, I read the title ("Ancient Greece"), and I activated my own **prior knowledge** by talking about wanting to visit Greece, loving Greek food, knowing that the Olympics started in Greece, remembering something about Greek philosophers, recalling the Greek alphabet, and recollecting that some Greek letters are used in math and science. Mateo added that he had read a lot of Greek mythology, so he knew about Greek gods, like Zeus, which he couldn't imagine believing in. I made sure to express the value of Mateo's contributions. Then, I explicitly **predicted** that the chapter would probably tell us something about the history of Greece, going back a long, long time ago to ancient times. Mateo made reference to the timeline at the bottom of the title page and noted that the chapter was likely going to be covering that span of time. Again, Mateo's contribution was acknowledged as valuable to the discussion. Then, I noted the picture of the map of Greece on the title page and reflected on the fact that the country was surrounded by water and that could make Greece vulnerable to attacks from enemies, which was one of the teacher's questions that we were going to have to answer. I noted, "Mateo, we haven't even passed the title page, and we've already answered one of your questions!"

As we continued to read and discuss titles, subtitles, figures, and bold words, we came to a picture of the philosopher, Socrates; the caption indicated that he was sentenced to death by drinking hemlock. Mateo commented that his name was Socrates, but he wasn't wearing socks. I said, "That's true. I bet you'll be able to **picture** that picture of Socrates without socks being poisoned! It says he was actually killed for asking too many questions and not accepting others' beliefs about the Greek gods. You and Socrates were a lot alike! Are you wearing socks (joking)?" We then came to a section about the Roman rule in Greece, Mateo stopped me because of some confusion about whether the Romans referred to people from Italy, so we **paused** and looked at the map to check our comprehension. I praised Mateo for his pausing to get clarification and told him that skilled readers do that all of the time. By the time the chapter had been 'read,' only 23 minutes had passed, and Mateo was shocked that it took so little time. He was even more shocked that he was able to recount most of the chapter to his mother and answer about two-thirds of the questions without going back to the text. Furthermore, for those questions he couldn't answer, he knew exactly where to look in the text to find the answers. He was beginning to buy-in. So, while he was feeling positive, I provided Mateo and his mother with scripts that they could use while reading to help him learn how to learn from his readings (see Figure 6).

Figure 3. Student Dependency Rating Scale.

Date: _____

Activity(ies): _____

	By myself	With minimal help	With some help	With a moderate amount of help	With a lot of help	Couldn't do at all by myself
I was able to complete this task.						

Comments: _____

Figure 4. Parent Dependency Rating Scale

Date: _____

Activity(ies): _____

	Not at all	Minimally (less than 10%)	Less than 1/3 of task	About 1/2 of task	Most of task (2/3 or more of task)	All of task
I assisted my child . . .						

Comments: _____

Figure 5. Stress Rating Scale.

Date: _____

Activity(ies): _____

	None	Very Low	Low	Medium	High	Very High
Level of stress experienced doing homework/studying:						

Comments: _____

Figure 6. Scripts for Boosting Connections

Pre-reading	• What does the title mean?
	  ○ How does the title relate to what I've learned in class?
	  ○ To my own knowledge and experiences?
	• What do the headings mean?
	  ○ How do the headings relate to the title?
	  ○ To what I've learned in class?
	  ○ To my own knowledge and experiences?
	• What do the bold/italicized words mean?
	  ○ How do the bold/italicized words relate to the heading?
	  ○ To the title?
	  ○ To what I've learned in class?
	  ○ To my own knowledge and experiences?

During reading	• What is the main idea of this paragraph?
	  ○ How does the paragraph relate to the heading?
	  ○ To the title?
	  ○ To what I've learned in class?
	  ○ To my own knowledge/experiences?
	• What is the main idea of this section?
	  ○ How does the section relate to the heading?
	  ○ To the title?
	  ○ To what else I've learned in class?
	  ○ To my own knowledge/experiences?

Post-reading	• What is the main idea of this chapter/article?
	  ○ How does this chapter/article relate to what else I've learned in class?
	  ○ To my own knowledge and experiences?

Conclusions

While students with dyslexia may not experience generalized language comprehension difficulties, they can experience difficulties with comprehension of and learning from written texts. When a careful assessment of oral and written language skills reveals deficits in awareness, understanding, and/or use of metacognitive reading strategies, there are effective approaches available for helping these students *learn how to learn* from written texts.

Using the 5S Framework for Balanced Intervention (see Fallon et al., in press; Katz & Fallon, 2015), clinicians can make certain to consider the five essential components in developing an intervention plan: *skills*, *strategies*, *school*, *student buy-in*, and *stakeholders*. Depending upon the student's individual needs, one or more 5S's may need more or less attention than the others. In order to become more efficient and proficient comprehenders and learners, many students with dyslexia will continue to require direct instruction in word reading *skills* (such as sound-to-letter mapping, syllable division, and morphological analysis). However, for many older students with dyslexia, metacognitive *strategy* instruction is a necessary supplement. The 6 Ps (prior *knowledge*, *purpose*, *predict*, *preview*, *picture*, and *pause to check in)* are effective reading comprehension strategies for increasing efficiency, enhancing engagement, identifying the central messages and themes found in texts, boosting understanding and connections with prior knowledge and knowledge that is yet to come, and, importantly, improving learning more broadly, not just comprehension, which is the ultimate goal. Furthermore, utilizing material from the *school* curriculum provides a natural link to the setting in which students spend most of their time engaged in literacy learning, which also provides increased chances for *student buy-in*. In working with our students with dyslexia, helping to ensure that they are getting additional support from school personnel, as well as other *stakeholders,* is also important in contributing to their academic success.

We have provided case descriptions of two students for whom the use of the 6Ps within the 5S framework proved to be successful in improving reading comprehension for both narrative and expository texts within a very short timeframe -- 4 one-hour sessions. This model is easily adaptable to a group therapy setting. When intervention focuses on the 6Ps within a particular curricular content area using the 5S framework, students with dyslexia will be armed with new tools and strategies that they can then utilize in other curricular areas. As a result, they become more independent and confident learners, which can further empower them as they tackle new problems and challenges in school and life.♦

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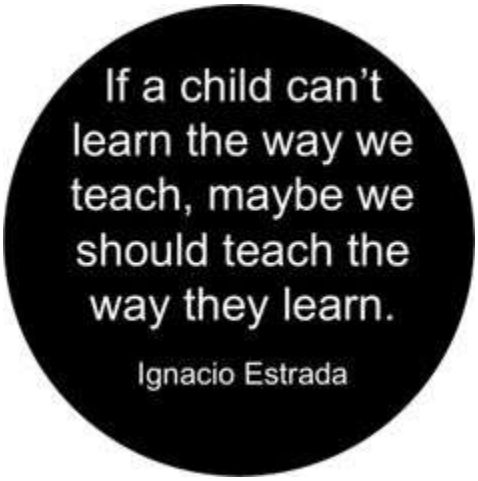
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