Teaching Recovery Intervention for a Child with Autism Spectrum Disorder and Attention Deficit Hyperactivity Disorder: Teaching Melissa to Read

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Author’s Note: Melissa is a pseudonym.

Introduction
Melissa was excited to begin first grade. Regrettably, however, Melissa’s neurodevelopmental disorders eroded that excitement. Melissa demonstrated behaviors consistent with diagnoses of autism spectrum disorder (ASD) and attention deficit/hyperactivity disorder (ADHD) while attending preschool. ASD is a neurodevelopmental disorder that is characterized by difficulties in social and reciprocal communication, repetitive patterns of behavior, and perseverative interests in approximately 1 in 59 children (Baio, Wiggins, Christensen, et al., 2018). Given the challenges associated with communication, some children with ASD will experience difficulties in learning if teachers are not responsive to their individual learning strengths in their design and delivery of tasks. Therefore, at the early age of 3, Melissa was placed on an individual educational plan (IEP) with goals related to social and fine motor skills as well as speech and language. Melissa’s occupational therapy needs included necessary attention to fine motor skills and sensory regulation (self-calming activities) and strength building.

As Melissa progressed to first grade, academic achievement goals were added to her IEP requiring additional services for math, reading, and writing. At the beginning of first grade, her IEP reading goals related to decoding, accuracy, and fluency. Melissa often became distracted during reading activities and her oral reading displayed invented text. IEP goals for writing included formulating and composing complete sentences and correct usage of upper and lowercase letters. Melissa’s oral language was a strength. She spoke in complete sentences, used appropriate vocabulary, and asked relevant questions in conversation. However, Melissa struggled to attend to instruction; moreover, she frequently displayed defiant, counterproductive behaviors such as resistance toward instructional support in both the classroom and resource room settings. In order to attenuate defiance and improve responsiveness, medical professionals modified Melissa’s treatment and medications. Educators and medical professionals collaborated to adjust instruction for Melissa in the classroom and resource room. Nevertheless, Melissa was one of the lowest literacy achievers in the first-grade class. Clearly, her situation was complex and compelling. Melissa’s behavioral and medical treatments were constantly changing; however, the lack of progress in literacy warranted special consideration.

The district psychologist, occupational therapist, special education teacher, classroom teacher, reading specialist, Reading Recovery® teacher, and principal considered Melissa’s situation and constructed a dual-faceted plan. The plan included ongoing placement in the special education program plus concurrent, individualized instruction in literacy provided by the Reading Recovery teacher. Melissa’s Reading Recovery intervention began at mid-year. The school team was confident in their decision that Reading Recovery would facilitate literacy growth as well as provide response to instruction information useful for ongoing planning.

Critics of Reading Recovery may pose this salient question: Is Reading Recovery suitable for a young child with diagnoses of ASD and ADHD?
Unequivocally, the answer is yes. By its very design, Reading Recovery is intended to be inclusive — to encompass every single student who falls in the category of most at risk for reading failure. Alternately stated, it does not exclude such students for any reason. This fundamental tenet is attributable to the mindset and dispositions of Dr. Marie Clay (2005), founder of Reading Recovery. She decisively expressed this pivotal element of the program:

As a preventive intervention, Reading Recovery does not discriminate when selecting children for extra help. A prior classification of diagnosis of emotional problems, learning disability, attention deficits or double deficits problems would not exclude them from selection for a period of diagnostic teaching. If they are in the lowest 20 percent of the age cohort who entered school with them, then the first step in a sequence of help is to work with them to try to develop a reading and writing process that could help them work in ordinary classrooms. (p. 178)

The Reading Recovery teaching procedures are clearly, carefully, and thoughtfully designed. As an individually responsive intervention, Reading Recovery lessons are tailored to the learner—shaped by analyses of the child’s strengths and prior knowledge—in order to progress and elevate performance. Lessons begin with a focus on realistic accomplishments; they align with the student’s particular strengths. Building on this basic starting point, the progression gives rise to the student’s literacy development. The inherent goal centers on solid advancement of each student’s reading and writing within the shortest possible timeframe (Clay, 2016).

As expert teachers, Reading Recovery professionals are singularly qualified to deliver this intervention. Through intense education and rigorous mentor-based training, they acquire advanced skills specific to reading instruction as well as insightful understanding relevant to helping each child succeed. Moreover, these educators maintain expectations for success, anticipating that the lowest-achieving children will learn to read and write (Lyons, 2003).

Not surprisingly, children with ASD are commonly reported to experience difficulty with comprehension. Contributing factors vary but could include inability to decode words, difficulty with word meanings, lack of prior knowledge and experiences related to content, language difficulty, and insufficient understanding of affect — the emotional context of a passage (Wheeler, Mayton, & Carter, 2014).

Moreover, cognitive issues manifest as behavioral issues. Children with ADHD struggle with sustained attention. Once focused, they are often readily distracted—and classrooms are full of distractors (noise, movement, transitions, etc.). Such students preferentially attend to nonproductive stimuli, including environmental clutter, as opposed to books and relevant educational resources. And finally, they require a high degree of structure, teacher monitoring, and support.

As well, students with ASD present behavioral issues independent of those influenced by cognitive issues. Many are afflicted with sensory dysfunction; reactions to stimuli, such as noises and light, can be extreme. These children typically grapple with language—not only verbal expression, but also responses to communication (both written and spoken). They may feel threatened by changes in expectations, rules, and surroundings. In addition, most lack executive functioning skills, or the ability to plan and complete multistep projects.

To address the myriad challenges, Carnahan, Williamson, and Haydon (2009) formulated operational guidelines. These instructional recommendations closely align with teaching procedures and practices espoused by Reading Recovery. Teaching procedures, offered by Clay (2016) accommodate for the most severe learning needs and give teachers multiple strategies for incorporating techniques to support unique challenges, such as those presented by Melissa. Examples in Table 1 validate this assertion.

**Teaching Melissa**

Because Melissa was diagnosed not only as having ASD, but also ADHD, treatment for both conditions was essential. Melissa’s severe ADHD symptoms and defiant behaviors were treated with medication. Evidence-based practice points to the efficacy of positive behavior supports paired with medication as warranted by a physician with consent of her family.

Challenging behavior manifests a function or need for the learner; it is often triggered by environmental events and results from skill deficits on the part of the learner (Wheeler & Richey, 2018). To succeed in instruction, Melissa required intervention to attenuate her behaviors. During the school day, a resource teacher and a
teaching assistant in the classroom provided Melissa with behavioral supports in accordance with IEP goals of staying on task and redirecting challenging behaviors. A weighted vest, fidget toys, visual prompts, and other items were employed to accommodate her learning and behavior support needs. Melissa received movement or sensory breaks during which she could pull a wagon weighted with several items, use a massager to rub her arms, engage in wall push-ups, sway on a swing available in the resource classroom, or jump on a mini trampoline. She also was allowed quiet time to help circumvent overstimulation.

In the context of Reading Recovery lessons, several different supportive actions and assistive devices proved helpful to Melissa. A weighted vest was always available. Sometimes she laid it across her lap; at other times she wore the vest. Wiggling was merely a part of her physical needs. Consequently, she was allowed to wiggle. When excessive movement jeopardized work completion, the Reading Recovery teacher placed a hand on Melissa’s back and applied gentle pressure as a form of reassurance and to reduce unwanted excessive movement. A rubber cushion placed on the chair better accommodated Melissa. Propelled by her excitement or need to move, Melissa periodically jumped up and started pumping her arms. In such instances, she was afforded an opportunity to engage in movement through small breaks from the lesson. After these brief breaks, she was typically ready to resume work.

The Reading Recovery teacher insightfully anticipated Melissa’s challenging behaviors and points of struggle. Melissa’s Reading Recovery teacher had to know and understand Melissa’s behavioral repertoire and skillfully detect oncoming changes in mood. Provision of positive comments or redirection to prevent unwanted behavior tremendously improved the lesson outcome. These well-timed strategies simultaneously averted unwanted responses and promoted cooperative behavior. Some of the challenging behaviors Melissa displayed during lessons included yelling, poking, pinching, squeezing, making faces, and pushing books away. Usually, a single small break was sufficient to allow Melissa to regain focus and resume work. Some days she needed multiple small breaks, and the Reading Recovery teacher accommodated her needs.

Given the language and communication challenges experienced by learners with ASD, challenging behavior is understandable; it can serve one of many functions. It may evidence the need for escape, a drive to modulate sensory input, and/or enable access to social or tangible reinforcers. Melissa’s behavior was linked to reaching her limit for a given day. Thus, the need to escape the task, perhaps due to fatigue and sensory input overload, occurred occasionally. Typical learners can sometimes communicate their level of frustration in more appropriate forms. Teaching learners with ASD compels an understanding of the purpose these behaviors serve. Once identified, a behavioral support plan aimed at management of triggers will prove instrumental to learning. A concomitant focus on positive replacement behaviors is equally valuable (Wheeler & Richey, 2018).

Positive student-teacher relations along with a concerted focus on each student’s individual strengths are paramount in Reading Recovery. Capitalizing on Melissa’s oral language strength propelled expressive dialogue and was a valuable resource for writing stories (Clay, 2001). She also exhibited command of the language structures found in early level texts. Additionally, throughout the individual lesson series, the Reading Recovery teacher and Melissa established a trusting relationship. The teacher intercepted and offered ways to solve without giving “a told.” Melissa felt empowered through her own solving and successful reading and writing. Reading Recovery teachers observe children’s responses and help them acquire the necessary experiences and skills for literacy success and maintain a positive environment conducive to their ongoing success. Reading Recovery teachers are expertly trained to tailor lessons to fit the needs of identified children (Lyons, 2003). Melissa urgently needed individualized instruction to gain
### Table 1. Guidelines for ASD Modifications and Reading Recovery Teaching

<table>
<thead>
<tr>
<th>Guidelines for ASD Modifications</th>
<th>Reading Recovery Teaching</th>
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<tr>
<td>Use visual props such as icons or pictures paired with words to support instruction.</td>
<td>For example, an individualized alphabet book created by the Reading Recovery teacher is used to support the development of letter knowledge. The child’s alphabet book is a record of the child’s links to letter names and corresponding sounds (Clay, 2016, p. 65).</td>
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<td>Use color-coding with text. If a child knows the intent of coding, color can be used to effectively draw attention.</td>
<td>For example, in text reading, a green sticker may be used to cue the starting point. A colored line on the left side of a page might be used to provide assistance with orientation for complex text (Clay, 2016, pp. 52-53).</td>
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<td>Use gestural cues with text.</td>
<td>To facilitate one-to-one matching while reading, the Reading Recovery teacher may assist the student with a helping hand in order to establish the link between print and the spoken word, to regulate looking at specific letters or clusters, and to reinforce written language directional requirements for reading (Clay 2016, p. 53).</td>
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<td>Use modeling and/or demonstration before the child attempts a task. Allow the child to see the task performed by the teacher.</td>
<td>Reading Recovery consistently begins with teacher demonstration. The teacher first describes and demonstrates the task; then performs the task along with the student; and, finally, calls on the student to independently complete the task. When teaching a letter, for example, the Reading Recovery teacher might first demonstrate its formation, then work with the child to trace the letter, then guide the child’s hand as they write the letter, and, ultimately, direct the child to construct the letter without assistance (Clay, 2016, pp. 64-68). Gradually transfer the task to the child.</td>
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<td>Use priming, or previewing. For example, this includes introducing and exposing material to the child before reading.</td>
<td>Reading Recovery teachers always provide introductions to new books that are supportive enough to ensure a successful first reading of the text and the child orients themselves to the story. Introduce the child to the book so that a few things in the book will provide opportunities for new learning. Ensure that prior knowledge (meaning), language processes, and visual processes can work together while reading (Clay, 2016, pp. 115-117).</td>
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<td>Provide explicit directions.</td>
<td>The Reading Recovery teacher uses the most explicit and concise language to help the child understand a task. They ensure that the child knows how to proceed before a prompt is given. Prompting language conveys maximum information with the fewest words so as not to confuse the child (Clay, 2016, pp. 140-141).</td>
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<td>Use pre-correction techniques.</td>
<td>Reading Recovery teachers anticipate what a child might do and prevent unwanted literacy behaviors from occurring (Clay, 2016, p. 182). They anticipate what will be challenging for a child and respond to them before the unwanted response begins. For example, pronoun references are particularly difficult for some children. Therefore, a Reading Recovery teacher might help the child understand who is being referenced when introducing the story.</td>
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<td>When teaching individual words, connect them to real text.</td>
<td>When introducing a new story, the Reading Recovery teacher makes the child familiar with new vocabulary or concepts and words and phrases of language he might never have heard. The teacher must plan for the child to have in his head the ideas and language he needs to complete the reading (Clay, 2016, pp. 114-115).</td>
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confidence and literacy knowledge. Her Reading Recovery teacher expertly individualized learning opportunities and provided necessary interactions required for effective learning.

Initially, Melissa struggled with the Reading Recovery lesson framework and persisted in many off-task behaviors. To respond to Melissa’s unique needs, the teacher provided a chart that served as a visual display of the lesson framework—a pictorial representation of each part of the lesson. As each component was completed, Melissa ‘checked it off’ with a marker. This simple scaffold enabled Melissa to get through the entire lesson framework.

Reading Recovery Lessons

Reading texts

Melissa began Reading Recovery lessons in January and initial testing revealed that she was not consistently attending to print. She could read a simple text with a repeated sentence pattern (e.g., Text Levels 2–3). She also knew many letters of the alphabet, identified a number of words in isolation, and was able to hear sounds in words. These were initial strengths to build on; however, her strengths were items of knowledge and she needed instructional support to develop a literacy processing system. Learning to look at print was an essential initial goal of the teacher’s planning and her predictions of progress.

During Roaming Around the Known, Melissa gained new behaviors as a result of the teacher’s careful modeling, including consistent left-to-right directional movement and more consistent one-to-one matching. Also during this time, Melissa’s Reading Recovery teacher created rich opportunities to engage Melissa in genuine conversations around her reading and writing activities. As indicated in Table 1, “talking” and “conversing” are a feature of ASD guidelines and an essential element of Reading Recovery teaching. Melissa enjoyed conversations with her Reading Recovery teacher, and throughout the series of lessons their conversations promoted Melissa’s engagement and enthusiasm in literacy and learning. Table 1 addition-
ally displays many of the techniques
the teacher used to support Melissa's
learning of essential, early behaviors.

Early lessons (reading at Levels 2–5)
revealed that Melissa was using
meaning and structure at point of
difficulty with less attention to visual
information, limited monitoring of
visual information, and little self-
correction behavior. A small card
was used to prompt Melissa where to
start reading, assisting her with atten-
tion to print. Melissa used this card
as needed. As she learned to look at
print more consistently and attend
to visual information to read a pre-
cise message (reading at Levels 7–9),
she monitored all sources of informa-
tion more consistently, and evidenced
more self-correction behaviors.
Increasingly, these self-corrections
revealed greater attention to addi-
tional visual information. Eventually,
Melissa began to read with accu-
rance and phrasing, and steadily
increased her self-correction rate. As
she became more successful analyz-
ing visual information (more-com-
plex words), she was more consistent
in using all sources of information,
monitoring and self-correcting most
errors (e.g., Level 12).

Ultimately, Melissa learned to attend
to and monitor all sources of informa-
tion; scan more complex words
on-the-run and read them success-
fully; and self-correct at a high rate.
She displayed reading enjoyment
and identified favorite characters in
books that captured her attention and
excitement. Gilbert the pig was an
emergent favorite. She also loved the
Bella and Rosie book series plus addi-
tional books that involved talking
animals. Melissa talked about these
stories enthusiastically revealing
excellent comprehension of these
texts. At the end of her access to
Reading Recovery lessons, near the
end of the school year, Melissa's
Reading Recovery teacher shared the
following statement of Melissa's pro-
gress and performance:

By the end of Reading Recovery
she was utilizing many strate-
gies, such as rereading, using the
first sounds, chunking, and self-
monitoring to make it look right
as well as make sense. I truly felt
like Melissa finally saw herself as
a reader by the end of Reading
Recovery. Before, it was just
something she avoided.

Writing and composing
Melissa's daily story composing
revolved around her favorite texts.
Examples from early to later lessons include these:

• Gilbert the pig got a broken leg.
• Gilbert punched Bella in the face.
• Gilbert the pig ran to Fat Cat.
• Baby Bear scares Father Bear
  and Mother Bear.
• Baby Bear is getting taller like
  Hector.
• Gilbert is a special pig. He got
  married to Miss Pig.
• Gilbert is happy because he
  likes the farmer.

Melissa's initial strength with
Hearing and Recording Sounds in
Words (HRSIW) assisted her in
recording her messages, and she also
seemed to acquire a more exten-
sive writing vocabulary as a result of
her writing opportunities. Sharing
the writing task with her Reading
Recovery teacher, including sharing
the completion of sound and letter
boxes, provided the essential support
for Melissa to gain confidence in her
writing. She enjoyed composing and
writing stories of her favorite charac-
ters and, over time, she was able to
write more-complex sentences. Her
Reading Recovery teacher's observa-
tions of Melissa's increased comfort
with risk taking suggest that Melissa
was becoming a more independent
learner:

Early in lessons she realized
that the writing would be a
shared activity between us, and
that encouraged her to take a
few more risks and not lose her
patience as much. Finding that
fine line between pushing her to
apply her own skills and giving
her assistance was likely more
important with Melissa than any
other student I've taught. I knew
she needed to learn to view writ-
ing as a positive activity and not
a negative one.

In her writing, as well as in reading,
the Reading Recovery teacher's atten-
tion to linking word learning to per-
tinent and meaningful information to
Melissa seemed an important aspect
of her progress. For example, learning
about taking words apart by breaking
the word farmer into chunks (farm-
er) was important to Melissa due to
her fascination and motivation to
read and write stories about Gilbert
the pig. Additional support for
Melissa linked to the reciprocity of
writing and reading and included her
attention to letter sorts, taking words
apart, and linking word learning to
words of special meaning to her.
Melissa’s reading and writing progress
To examine Melissa’s progress in reading and writing, her pre- and post-lessons Observation Survey results are displayed in Figure 1.

The Observation Survey (Clay, 2013) reveals that Melissa began lessons reading on Text Level 3. She tested at Level 14 at the time her lessons ended. This growth was substantial even though her reading in this test situation did not reach a level commensurate with her first-grade peers. It is important to share that at this same time, Melissa’s classroom teacher was finding her successful in guided reading lessons at Level 16, and her Reading Recovery teacher found her successful at Level 17 in texts of high interest if given an effective book introduction. These indicators confirm that Melissa had made substantial progress as a result of the instruction her Reading Recovery teacher provided. Most importantly, Melissa enjoyed reading, especially any stories that included her favorite characters and topics.

At the conclusion of her Reading Recovery lessons, Melissa wrote 55 words on the Writing Vocabulary task (see Figure 1), displaying substantial growth in writing vocabulary (see Figure 2). On this task, as on the Word Test, the Concepts About Print task, and the HRSIW task, Melissa’s scores were at stanine 5, or at average in comparison to learners her age.

Prior to beginning lessons in January, Melissa’s learning was stagnant and spiraling lower due to her frustration, her behaviors, and her overall difficulty in focus and engagement with learning. With her Reading Recovery teacher, Melissa made remarkable growth in her literacy learning, and as lessons ended, she exhibited effective literacy processing strategies in the context of both lessons and in her classroom.

Summary of learning
Melissa, a child deemed one of the lowest literacy learners in her school and identified with ASD and ADHD, made substantial progress and demonstrated new literacy behaviors at the close of her Reading Recovery lessons. Identified early

Figure 1. Melissa’s Observation Survey Stanines and Raw Scores

<table>
<thead>
<tr>
<th>Task</th>
<th>January Stanine</th>
<th>January Raw Score</th>
<th>May Stanine</th>
<th>May Raw Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter Identification</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Ohio Word Test</td>
<td>11</td>
<td>4</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>Concepts About Print</td>
<td>17</td>
<td>5</td>
<td>20</td>
<td>14</td>
</tr>
<tr>
<td>Writing Vocabulary</td>
<td>14</td>
<td>5</td>
<td>30</td>
<td>5</td>
</tr>
<tr>
<td>Hearing and Recording Sounds in Words</td>
<td>5</td>
<td>3</td>
<td>36</td>
<td>4</td>
</tr>
<tr>
<td>Text Reading Level</td>
<td>14</td>
<td>3</td>
<td>14</td>
<td>3</td>
</tr>
</tbody>
</table>

Figure 2. Melissa’s Growth in Writing Vocabulary: January – May
for special education, Melissa is an example of a child for whom Reading Recovery has made a substantial impact on her literacy acquisition. The Reading Recovery teacher’s observations, her responsive teaching, and her insightful selection of high-interest materials contributed positively to Melissa’s improved focus on learning and success in reading and writing.

Through individualized lessons and decisive interactions in Reading Recovery, in concert with the teamwork of the resource teacher, speech pathologist, classroom teacher, and occupational therapist, Melissa received support to promote her literacy learning. The entire educational team recognized Melissa’s progress and confidence in literacy. Melissa truly embraced the role of reader and writer. She learned to experience reading and writing in a positive, meaningful way — building on her individual needs and strengths with the help of a highly responsive skilled Reading Recovery teacher. Ultimately, Reading Recovery positioned Melissa for a brighter future.

Conclusion
A child’s status at the beginning of a literacy intervention does not allow for an accurate prediction of outcome. But, Reading Recovery—with its individualized instruction coupled with teaching expertise—optimizes the possibility of success. The Reading Recovery intervention provided Melissa the opportunity for relevant activities and a degree of autonomy (Johnston, 2012). Melissa developed critical understanding through carefully designed, individualized lessons prescribed to fit her needs by her Reading Recovery teacher. She was fully engaged, an advantage for her learning. This assertion applies to all students determined to be at risk, including those with autism. Indeed, no child need be excluded from an opportunity to learn and grow (Clay, 1991; Clay, 2015; Lyons, 2003). The opportunity for individualized instruction by a specialist Reading Recovery teacher is the critical component for helping challenging learners realize literacy success.

Finally, although Melissa’s access to Reading Recovery lessons ended as she was promoted to second grade, it was important to continue monitoring her progress and offering her classroom teacher support and advice. If her school had a Literacy Lessons™ teacher, Melissa might be a candidate for ongoing individual instruction from the Literacy Lessons teacher to ensure her ongoing development as a proficient reader and writer (Konstantellou & Lose, 2009; Lose & Konstantellou, 2017).

References
About the Authors

Dr. Annie Opat is director and trainer of Reading Recovery at Emporia State University. She has served as chair and vice-chair of the NATG Teaching and Professional Development Committee and has co-chaired the Teacher Leader Institute for several years. Currently, she chairs the Foundation for Struggling Readers at RRCNA. Opat has presented at numerous regional Reading Recovery and early literacy conferences, the International Literacy Association, and Literacy Research Association. Her current research interests include striving readers and alternative pathways of learning using multimodal methodology.

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