

THE EFFECT OF DIALOGIC READING WITH AN ADAPTED READER ON NARRATIVE
READING COMPREHENSION OF HIGH SCHOOL STUDENTS
WITH AUTISM SPECTRUM DISORDER

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PREVIEW

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The Effect of Dialogic Reading With an Adapted Reader on Narrative Reading
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ABSTRACT

Reading comprehension is essential for accessing grade-level content; however, students with autism spectrum disorder (ASD) often demonstrate narrative comprehension difficulties related to language inferencing and self-regulation (Constable, 2013; Duke & Cartwright, 2021).

Dialogic reading is an evidence-based shared reading practice that uses systematic prompts and contingent consequences to strengthen verbal behavior (Whitehurst et al., 1988; IES, 2007).

Despite demonstrated effectiveness with young children with ASD, experimental research on dialogic reading with secondary school-aged students, particularly those requiring adapted instructional materials, remains limited (Hudson & Test, 2011; Spooner et al., 2012). The purpose of this study was to evaluate the effects of dialogic reading with adapted readers on narrative reading comprehension in high school students with ASD. Adapted readers were defined as modified texts that reduce linguistic and cognitive demands through simplified language, controlled vocabulary, visual supports, and predictable narrative structures (Spooner et al., 2009; Mims et al., 2012). Dialogic reading was implemented using systematic PEER procedures and CROWD prompts (Whitehurst et al., 1988). Narrative reading comprehension was operationally defined as the percentage of correct responses on researcher-developed comprehension measures. A multiple-probe design across participants was used to evaluate the functional relation between the intervention and reading comprehension. Results demonstrated a clear functional relationship, with immediate and sustained improvement in comprehension following the onset of intervention.

Keywords: autism spectrum disorder, dialogic reading, adapted readers, reading comprehension, single-case design

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DEDICATION

I dedicate this dissertation to my ancestors.

9/11/2025

4/24/1915

PREVIEW

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CHAPTER ONE: RESEARCH OVERVIEW

Introduction

According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, to qualify for a medical diagnosis of autism spectrum disorder (ASD), a child must show abnormalities in three areas of social communication and interactions and two abnormalities in the restrictive and repetitive behavior domain (5th ed.; DSM-5; APA, 2013). The three areas under the social communication and interactions diagnostic domain include (a) reciprocity, (b) non-verbal communication and body language, and (c) maintaining of relationships (APA, 2013). The restrictive and repetitive behavior domain for ASD includes several key areas. These are (a) stereotyped or repetitive movements, use of objects, or speech (e.g., hand flapping, lining up toys, humming); (b) insistence on sameness and routines (e.g., rigid thinking patterns); (c) highly restricted, intense interests (e.g., focused topics); and (d) unusual sensory responses (e.g., indifference to pain) (APA, 2013). ASD is a neurodevelopmental disorder that is primarily influenced by genetics and is equally prevalent across individuals of all racial and ethnic groups. According to the most recent surveillance summary from the Autism and Developmental Disabilities Monitoring Network (CDC, 2025), the overall prevalence of ASD across 11 monitoring sites in the United States is 1 in 31 children. Among the children with ASD, 49% were evaluated for ASD by the age of 36 months, with the median age of a confirmed diagnosis of 49 months (CDC, 2025).

The Common Core State Standards

The purpose of the Common Core State Standards for English Language Arts (ELA) is to increase the likelihood that high school students will be college and career-ready by the time they graduate (Common Core State Standards Initiative [CCSSI], 2010). According to the

CCSSI, the standards are a framework that outlines what students should master at each grade level, rather than prescribing how the standards should be delivered. As a result, teachers have the flexibility to use any curriculum provided by their school and retain the autonomy to incorporate additional content, reading interventions, and reading materials. Effective implementation of the CCSSI requires instructional flexibility, including differentiated supports and modifications that respond to the heterogeneous needs of learners with disabilities (CCSSI, 2010).

Despite this flexibility, the CCSSI presents challenges for students with ASD, particularly around reading comprehension. According to Constable (2013), these challenges are primarily associated with three core areas of difficulty common among students with ASD: (a) limited theory of mind (Baron-Cohen, 1995), (b) limited central coherence (Frith & Happe, 1994), and (c) limited executive function (McGee & Lord, 2001). Theory of Mind refers to the ability to understand and interpret the thoughts, intentions, and emotions of others (Baron-Cohen, 1995). Students with ASD may struggle to interpret nonverbal cues, misread social situations, or have difficulty relating to others' perspectives, which can make character motivations and interpersonal dynamics in literary texts challenging to understand (Constable, 2013). According to Constable (2013), the CCSSI does not address these social-cognitive challenges in ELA standards, which often require students to infer characters' emotions, intentions, and behaviors.

In addition to ToM, successful engagement with the CCSSI requires strong central coherence skills, or the ability to integrate details into an overall meaning (Constable, 2013). Many students with ASD have difficulty with focused attention to detail and with assimilating and synthesizing information to form a general overview (Constable, 2013). For example, a

student with a hyperfocus on horses may fixate on references to horse-drawn carriages in a story about the Great Depression, while struggling to understand the broader historical or thematic significance of the narrative.

Executive functioning challenges may further impede a student's ability to meet the CCSSI's organizational and analytical demands. According to the National Research Council (McGee & Lord, 2001), executive functioning requires working memory, time management skills, and the ability to shift one's focus. A meta-analysis conducted by Wong et al. (2022) identified common executive functioning challenges among students with ASD, including inhibitory control (the ability to suppress inappropriate thoughts, actions, or emotions), working memory (the ability to hold information and allow for problem-solving and reasoning), cognitive flexibility (ability to switch between tasks or mental sets), and planning and organization (the ability to set goals, organize tasks, and monitor progress). These challenges can impact a student's ability to manage complex reading tasks, track narrative elements, and synthesize information across chapters or texts. As such, the language and cognitive demands embedded in the CCSSI (2010) can create comprehension challenges for students with ASD, particularly in reading literature. For example, CCSS.ELA-Literacy.RL.9-10.3 requires students to analyze how complex characters develop over the course of a text and contribute to the development of the theme (CCSSI, 2010). In comparison, some students with ASD may successfully answer 'wh' questions with visual supports, but questions that require inference (answering 'why' and 'how') may be more difficult due to the demands of ToM, background knowledge, and executive functioning. Difficulties with central coherence may also result in attention to isolated details rather than the overall narrative; hence, limiting overall comprehension. This may be caused by reading the story word-for-word without understanding the bigger picture or by failing to build

connections between paragraphs and chapters. To address persistent literacy gaps among students with ASD, Proctor and Bacon (2020) emphasize the importance of teacher-focused literacy training that targets foundational literacy processes and the implementation of empirically supported instructional strategies.

Literacy in Teacher Education

Considering the inherent diversity of today's student population, literary research has continued to evolve. Several foundational frameworks in skilled reading development include the Simple View of Reading (Gough & Tunmer, 1986), findings from the National Reading Panel (NRP, 2000), Scarborough's Reading Rope (Scarborough, 2001), and the Active View of Reading (Duke & Cartwright, 2021).

Simple View of Reading

Gough and Tunmer (1986) introduced the Simple View of Reading (SVR), a theoretical framework proposing that reading comprehension (RC) is the product of decoding (D) and linguistic comprehension (LC). According to this model, individual differences in decoding and linguistic comprehension account for much of the variability observed in reading comprehension outcomes. This theory has been widely supported in both general and special education research (see Figure 1) (Hoover & Gough, 1990).

According to the SVR, decoding refers to the efficient recognition of words, including the ability to accurately and fluently translate printed symbols into spoken words (Hoover & Gough, 1990). For beginning readers, decoding is phonological as learners must establish reliable associations between letter-sound correspondences in their mental lexicon. To support the development of fluency, the SVR requires that both the printed word and its pronunciation

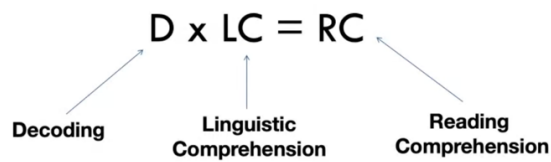
(letter-sound relationships) be presented to the beginner reader simultaneously, multiple times, quickly, and accurately (Hoover & Gough, 1990).

Linguistic comprehension, in contrast, involves the ability to derive meaning from spoken language through the analysis and interpretation of semantic and syntactic information. In contrast to reading comprehension, linguistic comprehension does not rely on graphic-based symbols (words) and print (writing). Still, it is assessed through listening, for example, by answering questions about orally presented texts. (Hoover & Gough, 1990). The SVR allows educators to identify patterns in reading abilities across decoding and language comprehension. That is, deficits in either decoding or linguistic comprehension will limit overall reading comprehension, such that a student's reading comprehension cannot exceed their level of development in the weaker component (Gough & Tunmer, 1986).

According to the SVR (1986), below-average reading skills can be explained by three correlations: (a) decoding skills are average, but linguistic comprehension is below average; (b) linguistic comprehension is average, but decoding is below average; (c) when both components are below average (Hoover & Gough, 1990). Furthermore, reading comprehension shows a similar relationship to the above. If (a) decoding skills are below-average, so is reading comprehension; (b) increased performance in reading comprehension correlates with improved decoding skills (Hoover & Gough, 1990). Developmentally, the relationships among decoding, linguistic comprehension, and reading comprehension vary across grade levels. In the early grades, decoding tends to be the strongest predictor of reading comprehension, whereas in the later grades, linguistic comprehension emerges as the primary determinant of successful reading comprehension (Hoover & Gough, 1990).

Figure 1

Simple View of Reading



Note. The Simple View of Reading model proposes that reading comprehension (RC) is the product of decoding (D) and linguistic comprehension (LC) (Gough & Tunmer, 1986). Decoding reflects word recognition processes, whereas linguistic comprehension reflects language understanding required for text comprehension Gough & Tunmer, 1986).

National Reading Panel

The National Reading Panel (NRP, 2000) conducted a comprehensive review of educational research to improve reading instruction for school-aged children. The panel identified five essential components of effective reading instruction: phonemic awareness, phonics, fluency, vocabulary instruction, and text comprehension (NRP, 2000). Together, these components support a student's ability to derive meaning from a text and develop proficient reading skills.

Phonemic awareness refers to the ability to hear, identify, and manipulate individual phonemes within spoken words (NRP, 2000). A student's level of phonemic awareness can be assessed through tasks such as phoneme isolation (beginning sounds), phoneme identity (same sound), phoneme categorization (a word that does not belong), phoneme blending (CVC words),

phonics segmentation (how many sounds), and phoneme deletion (NRP, 2000). According to the NRP (2000), students' early reading development is strongly predicted by foundational skills such as phonemic awareness and letter knowledge during the first years of schooling. Regarding assisting students in acquiring phonemic awareness, the NRP (2000) found that teaching phonemic awareness was significantly more effective than other forms of reading instruction. Explicitly teaching one or two phonemic awareness skills led to more significant effects than teaching a combination of three or more skills (NRP, 2000). For example, typically developing and at-risk readers gained phonemic awareness more effectively through phoneme manipulation with letters instead of teaching that did not include letters (NRP, 2000). Also, the student's learning was significantly higher when phonemic awareness was taught in small groups than in a one-on-one setting (NRP, 2000).

Phonics instruction enables beginning readers to use knowledge of letter-sound correspondence to decode unfamiliar words. The NRP identified several instructional approaches, including synthetic phonics, analytic phonics, embedded phonics, analogy phonics, onset-rime phonics, and phonics through spelling (NRP, 2000). Systematic phonics instruction was found to significantly improve reading outcomes, particularly for students in kindergarten through first grade and for students at risk for reading difficulties, including those with disabilities (NRP, 2000).

Fluent reading reflects the ability to decode text correctly, maintain an efficient reading rate, and use appropriate expression while reading (NRP, 2000). Fluent reading reduces the cognitive demands of decoding, allowing readers to allocate cognitive resources to comprehension. Students who struggle with fluency often have difficulty understanding meaning (NRP, 2000).

Vocabulary instruction supports a student's ability to understand and use words in both spoken and written language (NRP, 2000). Oral vocabulary refers to words known through listening and speaking, whereas reading vocabulary refers to words recognized in print (NRP, 2000). The NRP identified several factors that facilitate vocabulary acquisition, including exposure to storybook reading, meaningful interactions during reading, and multiple exposures to new words across contexts. For example, non-noun words (adverbs, verbs, and adjectives) are the easiest to learn; concrete words are easier to understand than abstract words; and storybook reading and the interactions established during storybook reading are essential components of indirect learning that contribute to vocabulary acquisition (NRP, 2000).

Reading comprehension is defined as the process of constructing meaning through associating ideas between the text and the reader (NRP, 2000). While many comprehension strategies develop informally, the NRP (2000) identified seven strategies that improve comprehension outcomes: comprehension monitoring, cooperative learning, graphic organizers, answering questions, generating questions, and summarizing the text (NRP, 2000).

The English Language Arts and Literacy standards within the CCSSI (2010) mirror the essential elements of effective reading instruction identified by the NRP, underscoring the importance of foundational literacy skills across grade levels. Students are expected to demonstrate increasing proficiency in decoding, reading with accuracy and fluency, determining word meanings in context, and analyzing texts to demonstrate comprehension; thereby, reflecting the evidence-based principles established by the NRP (CCSSI, 2010).

Scarborough's Reading Rope

Building the foundational principles of the SVR, introduced by Gough and Tunmer (1986), Scarborough's Reading Rope conceptualizes skilled reading as the integration of word

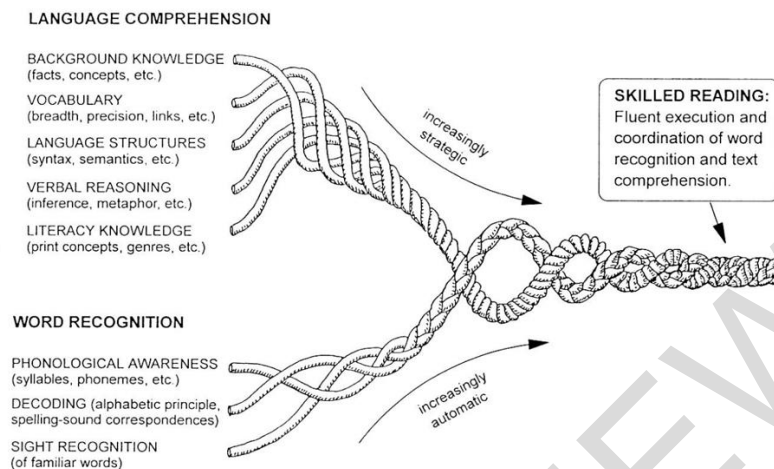
recognition and language comprehension, each composed of multiple interrelated strands (see Figure 2). What distinguished the Reading Rope from the SVR is its emphasis on the interdependence of these skills, rather than viewing them as singular constructs (Scarborough, 2001). According to Scarborough (2001), skilled reading emerges through the development of all strands within the rope. Each strand represents a distinct set of skills essential for reading acquisition, and growth in one strand supports and strengthens development in others. For example, increases in background knowledge may directly support vocabulary growth by exposing learners to new concepts and language.

The upper strands of the rope, which are the language comprehension domain, include background knowledge, vocabulary, language structures, verbal reasoning, and literacy knowledge (Scarborough, 2001). The lower strands, which fall under the word recognition domain, include phonological awareness, decoding, and sight recognition (Scarborough, 2001). As readers become more skilled, processing within the lower strands becomes increasingly automatic, while growth within the upper strands becomes more strategic and schema-based. Consistent with the SVR, delays in the development of any strand may limit overall reading proficiency, as weaknesses in one component restrict the effectiveness of the reading system.

Figure 2

Scarborough's Reading Rope

THE MANY STRANDS THAT ARE WOVEN INTO SKILLED READING



Note. Scarborough's Reading Rope conceptual model depicts skilled reading as the coordinated integration of word recognition processes (phonological awareness, decoding, and sight recognition) and language comprehension processes (background knowledge, vocabulary, language structures, verbal reasoning, and literacy knowledge), which become increasingly automatic and strategic with reading development (Scarborough, 2001).

Groundwork for the Science of Reading

The Science of Reading (SoR) reflects advancements in the understanding of reading development that extend beyond the SVR (Duke & Cartwright, 2021). Duke and Cartwright (2021) highlight the complexity of reading comprehension and propose a broader framework that