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The Importance of Teacher Interaction Behaviors in Interactive Book Reading for the Listening Comprehension and Language Skills of Children with Autism: A Traditional Review

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ABSTRACT

This study was conducted as a narrative review to examine the significance of teacher interaction behaviors within the context of interactive book reading (IBR) on the listening comprehension and language skills of children diagnosed with autism spectrum disorder (ASD). The research design was based on a traditional review approach, and the literature search was carried out using the PubMed, Scopus, Web of Science, and Google Scholar databases. Findings from the reviewed studies indicate that IBR is a structured method that enhances children's vocabulary, expressive abilities, and listening comprehension. In particular, the PEER and CROWD strategies have been found effective in supporting the language development of children with ASD. During this process, teachers' sensitive, responsive, and directive interaction behaviors strengthen both social interaction and cognitive learning. The review results highlight the necessity of individualizing IBR practices and improving teachers' pedagogical knowledge. Accordingly, providing training for teachers and parents on the use of IBR may contribute to long-term and sustainable improvements in the language development of children with ASD.

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dialogic book reading;
language skills;
listening comprehension;
shared book reading;
teacher-child interaction behaviors

INTRODUCTION

Language development is among the fundamental skills shaping an individual's cognitive, social, and academic life; linguistic competencies acquired during early childhood directly affect lifelong learning and social adaptation processes (Lord et al., 2004; Rogers & DiLalla, 1990). For children diagnosed with Autism Spectrum Disorder (ASD), this process becomes more complex due to developmental limitations and difficulties in social interaction (APA, 2013). Therefore, it is of great importance to use structured instructional methods to support the language and communication skills of individuals with ASD.

In this context, the Interactive Book Reading (IBR) method has emerged in recent years as an evidence-based practice that promotes the active use and comprehension of language while prioritizing social interaction (Whitehurst & Lonigan, 1998). IBR refers to a dialogic process in which the adult not only reads the book but also facilitates the child's participation. This process, structured with strategies such as PEER (Prompt, Evaluate, Expand, Repeat) and CROWD (Completion, Recall, Open-ended, Wh-questions,

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Distancing), has been shown to support significant progress in vocabulary acquisition, expressive abilities, and listening comprehension (Hargrave & Sénéchal, 2000; Tager-Flusberg et al., 2005).

In the interactive book reading process, the teacher's role goes beyond merely implementing strategies; the interaction behaviors exhibited by the teacher directly influence the child's participation, language use, and socio-emotional development (Hamre & Pianta, 2007). These behaviors include verbal and non-verbal actions such as sensitivity, responsiveness, acceptance, guidance, and reinforcement (Diken, 2009; Mahoney & Wheeden, 1999). For teachers working with children diagnosed with ASD, structuring these behaviors within the framework of pedagogical knowledge and awareness is critical for the effectiveness of IBR (Wright, 2011).

Studies show that IBR positively impacts both receptive and expressive language skills of children with ASD, while teachers require professional development to implement this method effectively (Ergül et al., 2016). However, there is a limited number of studies in the literature that deeply synthesize how teacher interaction behaviors integrate with the IBR process and affect the listening comprehension and language development of children with ASD.

Therefore, the aim of this study is to examine the effects of teacher interaction behaviors on the listening comprehension and language skills of children diagnosed with ASD within the context of interactive book reading, based on theoretical frameworks and current findings. Conducted as a traditional review, this research analyzes the intersection points of teacher interaction and interactive book reading practices by reviewing quality literature from international databases such as PubMed, Scopus, Web of Science, and Google Scholar. The study aims to provide a theoretical framework of teacher interaction behaviors to enhance the effectiveness of IBR in the field and to develop recommendations for practitioners.

METHODOLOGY

Study Design

This study was conducted as a narrative review to examine the effects of teacher interaction behaviors within the context of interactive book reading (IBR) on the language and listening comprehension skills of children diagnosed with autism spectrum disorder (ASD). The narrative review design allows for a comprehensive examination of the literature and synthesis of existing findings.

Data Collection

The literature search was carried out using the PubMed, Scopus, Web of Science, and Google Scholar databases. Keywords included "Autism Spectrum Disorder," "Interactive Book Reading," "Dialogic Book Reading," "Shared Book Reading," "Teacher Interaction," "Language Skills," and "Listening Comprehension." Only peer-reviewed articles were considered, while irrelevant or non-research studies were excluded. Full texts of the selected studies were accessed, and findings related to IBR applications in children with ASD were examined.

Data Analysis

The selected studies were analyzed using a thematic approach, with children's language development, teacher interaction behaviors, and IBR strategies identified as primary themes. Findings from each study were summarized, compared, and synthesized to identify common trends and differences across the literature.

Teacher Interaction Behaviors

Teacher interaction behaviors encompass both verbal and non-verbal strategies used throughout the instructional process to support and guide children's learning and to ensure their active participation in the learning environment. These behaviors include asking open-ended questions, modeling appropriate language use, expanding on children's utterances, maintaining joint attention, and employing gestures and facial expressions. Particularly for children diagnosed with ASD, these behaviors serve as a bridge for developing communication and comprehension skills. Teachers' sensitivity to children's communicative attempts and their ability to respond appropriately based on developmental levels foster a supportive and responsive learning atmosphere (Mulat et al., 2019).

A pioneering study conducted at Utrecht University by Wubbels and colleagues (1987) demonstrated a strong relationship between teachers' interpersonal classroom behaviors and discipline issues. Based on Leary's two-dimensional model (dominance and proximity), this approach categorizes teacher behaviors into eight types for analytical purposes (Wubbels, Creton & Haymayers, 1985). The resulting "Teacher Interaction Questionnaire" is used to identify discrepancies between teacher and student perceptions (Wubbels & Levy, 1993).

Research in the field indicates a strong association between teacher interaction behaviors and students' cognitive (academic success, language development) and affective (motivation, sense of belonging, attitudes) outcomes (Rawnsley & Fisher, 1998; Wubbels & Levy, 1991; Telli et al., 2010). Students who perceive their teachers as helpful and understanding tend to develop more positive attitudes toward learning, whereas perceptions of indecisiveness or authoritarianism may lead to negative attitudes. In this regard, cultural values, as well as non-verbal cues such as tone of voice, body language, and eye contact, play a crucial role (Saydam & Telli, 2011).

According to Hamre and Pianta (2007), emotional support, effective language use, and diverse materials are key indicators of quality teacher interactions. The teacher's role as a guide, supporter, and model influences the quality of interaction and directly affects students' motivation and participation through the establishment of a trusting relationship (Hathazi, 2014).

Teacher interaction behaviors should be considered not only within the instructional dimension but also across emotional, cognitive, and behavioral aspects. These behaviors shape students' attitudes toward learning, enhance their classroom participation, and contribute directly to the development of their social skills. In the literature, such behaviors have been classified in various ways. Sensitivity refers to the teacher's ability to closely observe student behaviors and respond with appropriate verbal or behavioral cues (Perry, Donohue & Weinstein, 2007). Responsiveness involves recognizing and reacting suitably to students' non-verbal cues (Howes, Matheson & Hamilton, 1994). Acceptance focuses on affirming students' actions, thereby enhancing their self-confidence and engagement (Sazak-Pınar & Güner-Yıldız, 2013). Reinforcement refers to encouraging positive behaviors through rewarding feedback (Tekin-İftar, 2014), while guidance involves the teacher's degree of control over activities and its impact on the child's development of independence (Diken, 2009). Enjoyment relates to the creation of a positive classroom atmosphere and the teacher's satisfaction in interactions with students (Vygotsky, 1998; Tu & Hsiao, 2008). Together, these components demonstrate that effective teacher-student interaction significantly contributes not only to academic success but also to students' psychosocial development.

With the advancement of technology, teacher-student interaction has extended beyond the classroom into digital environments. Virtual field trips, in particular, have emerged as experiential learning opportunities guided by teachers. These trips offer learning experiences in inaccessible locations, capturing students' attention and enhancing motivation (Behrendt & Franklin, 2014). Immersive

experiences using virtual reality (VR) headsets allow students to feel more present in the learning environment, positively impacting achievement (Makransky & Lilleholt, 2018). However, online learning environments also carry the risk of social isolation due to the absence of face-to-face cues (Bolliger & Halupa, 2012). In this context, the concept of social presence becomes central. Social presence involves individuals' ability to express themselves, build relationships, and sustain interaction (Garrison et al., 1999). Accordingly, teacher-student interaction influences not only academic success but also the sense of belonging and motivation within the learning process (Moore, 1989; Martin et al., 2018). In online discussions, the teacher's guiding role, the content of feedback, and communication style shape student participation and community building (Zhang et al., 2022). Teacher interaction behaviors thus constitute a multifaceted process that shapes students' socio-emotional development, learning motivation, and participation levels. Whether in physical or digital settings, effective teacher interaction remains a key determinant of student success.

The Importance of Interactive Book Reading for Children with ASD

Interactive Book Reading (IBR), also known as shared or dialogic reading, is an instructional strategy in which adults and children read books together through mutual interaction. In this process, the adult not only reads the book but also asks questions, encourages predictions, expands on the child's responses, and communicates through the narrative. For children diagnosed with ASD, IBR provides a structured and meaningful learning environment for areas of developmental difficulty such as communication, joint attention, and turn-taking.

IBR practices are of particular importance for children with ASD, as they tend to learn more effectively in structured and predictable environments (Whalon et al., 2009). The visual and narrative elements of books offer cues for language processing and comprehension, while the teacher's modeling and structured support enhance the process. Research has shown that IBR sessions incorporating visual supports and active teacher interaction behaviors enable children with ASD to construct longer and more meaningful sentences, expand their vocabulary, and increase their level of engagement (Mulat et al., 2019; Ziegler et al., 2020).

Language development in early childhood is a fundamental area that directly affects individuals' social, cognitive, and academic success. In individuals diagnosed with ASD, language and communication skills include not only expressive language but also the ability to establish relationships with others and to support mental processes. ASD is a neurodevelopmental disorder typically diagnosed in early childhood, characterized by limitations in social interaction and communication, as well as repetitive behaviors and restricted interests (APA, 2013). Delays in language development observed in these individuals pose risks not only for academic progress but also for social adaptation and emotional development (Lord et al., 2004; Rogers & DiLalla, 1990).

Therefore, IBR—an evidence-based instructional method—is considered effective for both typically developing children and children with ASD. In IBR, the child transitions from being a passive listener to an active participant. According to Vygotsky's (1978) Zone of Proximal Development (ZPD) theory, children can unlock their cognitive potential through social interaction. The PEER (Prompt, Evaluate, Expand, Repeat) and CROWD (Completion, Recall, Open-ended questions, Wh-questions, Distancing) strategies developed within this framework support children's processes of language processing, vocabulary acquisition, and meaning-making (Whitehurst et al., 1988; Hargrave & Sénéchal, 2000).

These strategies consider the individualized needs of children with ASD, such as difficulties in generalization, limited vocabulary, and short attention spans (Tager-Flusberg et al., 2005; Lonigan &

Whitehurst, 1998). Studies have shown that IBR can be implemented in home and school settings, during individual or group activities, and even through online platforms (Ergül et al., 2016).

IBR not only supports vocabulary learning but also teaches how to use words in social contexts. Through structured interaction, children with ASD have been observed to improve their generalization skills (Carnahan et al., 2009; Mucchetti, 2013; Wright, 2011). However, in order for these gains to occur, factors such as book type, question structure, frequency of repetition, and the interaction environment must be planned according to individual needs (Justice et al., 2005; Tekin-İftar & Kırcaali-İftar, 2006).

IBR is a flexible, research-based approach that supports language development, social interaction, and early literacy skills. For children with ASD, personalized and structured IBR applications can contribute to both language and social skill development and enable them to establish more effective communication with their environment.

The Importance of Interactive Book Reading on the Listening Comprehension and Language Skills of Children with ASD

Children with ASD often experience significant difficulties in listening comprehension, vocabulary acquisition, and narrative (storytelling) skills. However, these skills are essential not only for academic success but also for effective social communication. IBR allows children to hear words repeatedly in meaningful contexts, encouraging interactive conversations around the text. This process supports the development of syntactic and semantic knowledge, strengthens sequencing abilities in storytelling, and enhances higher-order language competencies such as inference-making (Crane et al., 2011).

IBR fosters active participation in the reading process by moving children beyond passive listening. Sessions enriched with cognitively demanding questions—such as "why" and "how"—support deeper language processing and inferencing skills. Children with ASD particularly benefit from such structured and visually supported environments. Indeed, research has shown that IBR improves turn-taking, initiations in communication, and overall language comprehension in children with ASD (Whalon et al., 2009; Ziegler et al., 2020).

Individuals with ASD often require intensive support in language and communication skills. Language is not only a tool for self-expression but also a core cognitive structure that facilitates interaction with others, learning, and mental development (Lord et al., 2004; Rogers & DiLalla, 1990). Therefore, there is a need for effective, evidence-based, and structured instructional approaches to support language development in children with ASD. IBR is an interactive learning experience built on the dynamic between the child, the adult, and the book. In this method, the child is not just a listener but an active participant engaging with both the text and the adult (Whitehurst et al., 1988). When supported with strategies such as PEER (Prompt, Evaluate, Expand, Repeat) and CROWD (Completion, Recall, Open-ended questions, Wh-questions, Distancing), IBR promotes vocabulary development, narrative competence, and listening comprehension (Hargrave & Sénéchal, 2000).

The common challenges observed in children with ASD—limited vocabulary and difficulty in generalization—can be addressed through IBR using targeted questioning, individualized repetitions, and visual supports (Tager-Flusberg et al., 2005; Carnahan et al., 2009; Wright, 2011). IBR also helps to extend attention spans and strengthen the capacity to extract meaning from text. Thus, IBR is an effective, evidence-based, and customizable approach for developing both listening comprehension and expressive language skills in children with ASD. The method’s reliance on repetition, visual-verbal richness, and active participation contributes significantly to improvements in both receptive and expressive language development.

The Importance of Teacher Interaction Behaviors in Interactive Book Reading

Interactive Book Reading (IBR) is a structured instructional process that supports not only language development but also children's social communication, attention, and participation skills. The success of this process largely depends on the quality of teacher interaction behaviors. Teachers' sensitivity to verbal and non-verbal cues, as well as their ability to provide timely and appropriate responses to children's communicative efforts, creates a reciprocal and meaningful learning environment. This is especially critical for children with ASD who struggle with expressive language and social reciprocity (Mulat et al., 2019).

Effective teacher interaction behaviors not only enhance vocabulary and syntactic skills but also support children in maintaining attention and engaging in social communication throughout the reading session. Strategies such as consistent reinforcement, positive feedback, and emotional support help encourage children's active participation and increase their motivation for learning.

Professional development programs focused on responsive teaching strategies and language facilitation techniques improve teachers' ability to implement IBR effectively. Research by Ziegler et al. (2020) indicates that training based on interactive alignment and emotional attunement yields positive outcomes in the language development of children with ASD. Therefore, investing in teacher professional development and promoting conscious interaction behaviors are essential to maximizing the potential of IBR.

The teacher's role in the IBR process goes beyond simply reading the text; it involves applying strategies that enhance participation, prompt language processing, and foster meaningful interaction. This interaction shapes not only cognitive but also socio-emotional development. According to Vygotsky (1978), social interaction is the most powerful tool in supporting the child's zone of proximal development. In this regard, the teacher is not merely a provider of knowledge, but a social facilitator guiding the child's linguistic engagement during IBR sessions (Whitehurst & Lonigan, 1998; Hargrave & Sénéchal, 2000; Justice & Pullen, 2003; Blom-Hoffman et al., 2007).

Studies have shown that the type and frequency of strategies used by the teacher vary depending on the child's developmental level. Justice et al. (2005) found that when teachers provide explanatory commentary and offer opportunities for active participation, children make greater gains in storytelling and vocabulary skills.

The importance of teacher interaction behaviors becomes even more apparent in studies involving children with special needs. Considering the limited vocabulary and generalization difficulties commonly observed in children with ASD, providing individualized and structured interaction is critical (Tager-Flusberg, Paul & Lord, 2005). The teacher's interaction style in IBR is not limited to delivering book content; rather, the teacher serves as a guide who helps the child structure language, construct meaning, and produce linguistic outputs. The quality of this interaction plays a decisive role in the development of expressive language, vocabulary, and listening comprehension skills in children with ASD. Therefore, the success of IBR largely depends on the teacher's pedagogical competence, strategic guidance, and interactive awareness.

Conclusion

This review study examined the impact of teacher interaction behaviors on the IBR process, specifically for children diagnosed with ASD, and evaluated how such interactions influence listening comprehension and language development. Findings from the literature reveal that directive, responsive, and expansive interaction styles exhibited by teachers have significant effects on vocabulary acquisition, expressive

language use, and listening skills. Structured strategies such as PEER and CROWD used during the IBR process increase the participation of children with ASD and facilitate the production of linguistic outcomes. These strategies not only support language development but also enhance children's socio-emotional adjustment and higher-order cognitive skills such as narrative sequencing.

In this process, the teacher's pedagogical competence, strategic awareness, and interactive guidance play a determining role in the effectiveness of the practice. The research underscores the need to increase teachers' awareness of their interactive behaviors during IBR and highlights the importance of supporting them through professional development programs. Additionally, involving parents in the IBR process helps extend natural learning environments and reinforces language development.

The flexible, individualized, and socially interactive nature of IBR offers significant opportunities for improving communication and cognitive skills in children with ASD. Therefore, IBR should not be viewed merely as a reading activity but rather as a comprehensive instructional strategy that supports the holistic development of the child. When combined with sensitive teacher interactions, a high-quality IBR process has the potential to meaningfully advance the language, thinking, and social participation skills of children with ASD.

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