Use of Neurodivergent Characters in Books to Support Perspective-Taking Abilities

Kristen Secora, PhD, CCC-SLP
Faculty Affiliate in the Tennessee Reading Research Center

Perspective-taking abilities are vital for kindergarten through fifth grade children's social and academic success (Lecce & Devine, 2022). Children are not born with the ability to explicitly consider how other people see the world differently or think differently from themselves. These are skills that must develop over time. Toddlers learn that other people have different desires than they do. Preschoolers start to understand that others think, believe, and feel differently from themselves and that those thoughts or beliefs can be incorrect (Peterson et al., 2005). Older school-aged children start to learn and use more complex skills that involve reasoning about others' thoughts or beliefs such as sarcasm, figurative language, and deception (Peterson et al., 2012).

Children's books provide rich contexts to spark discussions about others' thoughts, beliefs, emotions, reasons, and motivations (Farkas et al., 2020). Focusing discussions on characters' cognitive and emotional states can help build children's understanding of these concepts, which they can then apply beyond literacy settings. A number of studies have shown the effectiveness of using storybooks to improve children's understanding of others' perspectives (e.g., Ornaghi et al., 2011; Grazzani et al., 2016). These interventions are particularly effective when coupled with enriched language conversations encouraging children to actively use cognitive or emotion words (e.g., think, believe, feel, become angry). For example, after reading a book together, teachers asked the children questions to encourage them to think and converse about the emotions of the characters: "How do think the little rabbit felt in this story? Do you ever

get mad when someone takes your favorite toy? What do you do when you get mad?" (Ornaghi et al., 2017).

For neurodivergent children, perspective-taking skills also can be supported through storybook-based interventions (Hodges et al., 2018; Dodd et al., 2011). Deaf and hard of hearing children, autistic children, and children with Developmental Language Disorder and Down Syndrome have all been shown to benefit from direct instruction and modeling the vocabulary and syntax associated with cognitive and emotion words (e.g., Durrleman et al., 2019, 2022; Na & Wilkinson, 2018). However, when going through these types of discussions, professionals should be aware of how they are presenting these topics. Rather than presenting a specific thought process, emotion, or cognitive experience as the only "right" answer, these discussions instead can be framed more as comparisons of how different individual brains function. For example, a neurotypical person might interpret a character with their head down or a slumped posture as being lazy or sad, whereas a neurodivergent person might interpret the character's same body language as exhaustion from having to mask all day. Masking is a term used to describe when people intentionally or unintentionally hide aspects of themselves in order to avoid harm that can be physically tiring (Miller et al., 2021). Masking is frequently discussed in reference to autistic people but is also used by people with other kinds of neurodivergence, such as ADHD.

Discussing different inferences and viewpoints of the same characters' expressions can help children understand that other people think differently from them and that these discussions of differences should be embraced rather than avoided.

One way to naturally encourage these discussions about how someone's neurocognitive functioning might affect how they interpret and express thoughts and emotions is to read storybooks with neurodivergent characters. If the main character is autistic, as with *See Me* (Petrovic, 2022), knowledge about the neurotype of the character can help inform inferences about his thoughts and motivations for actions. In this book, David (an autistic man) wrote a story inspired by his experiences in high school. In the book, David is very excited about being invited to eat lunch with Nick. However, David was so overwhelmed to be invited to sit with a group of people for lunch that he did not participate in the conversation. Because Nick knew that David was autistic, he used that knowledge about David's neurodivergence to inform his interpretation of David's actions. Therefore, Nick did not infer aloofness or rudeness from David's lack of conversation and instead allowed David the space (over the course of many subsequent days) to become more comfortable. Eventually, David was able to participate in the ongoing conversation.

Discussions can reflect characters' thoughts, assumptions, inferences, expectations, and feelings throughout events such as those described above. This allows children with similar and different neurotypes to explore a variety of perspectives within the relative safety of discussing book characters, rather than their own first-person experiences. See the table (*below*) for example books featuring neurodivergent characters that can be incorporated into literacy activities.

These books may help foster discussions to explore various neurotypical and neurodivergent expressions of cognitive and emotional perspectives.

Book	Neurodivergence Represented
Cook, J. (2018) *Uniquely wired: A story about autism and its gifts* (A. DuFalla, Illus.). Boys Town Press.	Autism
Moore, A. (2020). *ADHD is my super power and it comes with super strength* (W. Sehat, Illus.). Winn Publications.	ADHD
Petrovic, D. (2022) *See me: The invisible autistic boy* (D.Petrovic, Illus.). (S. Petrovic, Ed.).	Autism
Rudolph, S.& Royer, D. (2015). *All my stripes: A story for children with autism* (J. Zivoin, Illus.). Magination Press.	Autism
Rudolph, S. & Vukadinovich, M. (2021). *Brilliant Bea: A story for kids with dyslexia and learning differences* (F. Lee, Illus.). Magination Press.	Dyslexia
Russell, N. (2021). *My busy, busy brain: The ABCDs of ADHD, a resource and children's book about ADHD* (A. Thomas, Illus.). Wise Ink Creative Publishing.	ADHD

Increased representation of all kinds of diversity within children's books (including neurodiversity) can help children learn to consider others' thoughts, beliefs, emotions, and experiences and how those might differ from their own. Consideration of others' perspectives is thought to be a critical component of reading comprehension (e.g., Kim, 2020) and can help both neurotypical and neurodivergent children develop a deeper understanding of characters and texts (Dodd et al., 2011; Hodges et al., 2018). Including books that feature neurodivergent characters can help support children as they learn to consider other perspectives than their own and may increase acceptance of others. It also may contribute to improvements in children's own self-esteem to see characters like themselves represented in stories.

References

Dodd, J. L., Ocampo, A., & Kennedy, K. S. (2011). Perspective taking through narratives: An intervention for students with ASD. *Communication Disorders Quarterly*, 33(1), 23–33. https://doi.org/10.1177/1525740110395014

Durrleman, S., Burnel, M., de Villiers, J. G., Thommen, E., Yan, R., & Delage, H. (2019). The impact of grammar on mentalizing: A training study including children with autism spectrum disorder and developmental language disorder. *Frontiers in Psychology*, 10. Article 2478. https://doi.org/10.3389/fpsyg.2019.02478

Durrleman, S., Dumont, A., & Delage, H. (2022). Syntactic strategy training for theory of mind in deaf children. *The Journal of Deaf Studies and Deaf Education*, 27(1), 89-100. https://doi.org/10.1093/deafed/enab034

Farkas, C., Santelices, M. P., Vallotton, C. D., Brophy-Herb, H. E., Iglesias, M., Sieverson, C., ... & Alvarez, C. (2020). Children's storybooks as a source of mental state references: Comparison between books from Chile, Colombia, Scotland, and USA. *Cognitive Development*, 53, 100845. https://doi.org/10.1016/j.cogdev.2019.100845

Grazzani, I., Ornaghi, V., & Brockmeier, J. (2016). Conversation on mental states at nursery: Promoting social cognition in early childhood. *European Journal of Developmental Psychology*, 13(5), 563–581. https://doi.org/10.1080/17405629.2015.1127803

Hodges, T. S., McTigue, E., Wright, K. L., Franks, A. D., & Matthews, S. D. (2018). Transacting with characters: Teaching children perspective taking with authentic literature. *Journal of Research in Childhood Education*, 32(3), 343-362. https://doi.org/10.1080/02568543.2018.1464529

Kim, Y. S. G. (2020). Hierarchical and dynamic relations of language and cognitive skills to reading comprehension: Testing the direct and indirect effects model of reading (DIER). *Journal of Educational Psychology*, 112(4), 667-684. https://doi.org/10.1037/edu0000407

Lecce, S., & Devine, R. T. (2022). Theory of mind at school: Academic outcomes and the influence of the school context. *Infant and Child Development*, 31(1), Article e2274. https://doi.org/10.1002/icd.2274

Miller, D., Rees, J., & Pearson, A. (2021). "Masking is life": Experiences of masking in autistic and nonautistic adults. *Autism in Adulthood*, 3(4), 330-338. https://doi.org/10.1089/aut.2020.0083

Na, J. Y., & Wilkinson, K. M. (2018). Communication about emotions during storybook reading: Effects of an instruction programme for children with Down syndrome. *International Journal of Speech-Language Pathology*, 20(7), 745-755. https://doi.org/10.1080/17549507.2017.1356376

Ornaghi, V., Brazzelli, E., Grazzani, I. G., Agliati, A., & Lucarelli, M. (2017). Does training toddlers in emotion knowledge lead to changes in their prosocial and aggressive behavior toward peers at nursery? *Early Education and Development*, 28(4), 396-414. https://doi.org/10.1080/10409289.2016.1238674

Ornaghi, V., Brockmeier, J., & Gavazzi, I. G. (2011). The role of language games in children's understanding of mental states: A training study. *Journal of Cognition and Development*, 12(2), 239–259. https://doi.org/10.1080/15248372.2011.563487

Peterson, C. C., Wellman, H. M., & Slaughter, V. (2012). The mind behind the message: Advancing theory of mind scales for typically developing children, and those with deafness, autism, or Asperger syndrome. *Child Development*, 83(2), 469-485. https://doi.org/10.1111/j.1467-8624.2011.01728.x

Peterson, C., Wellman, H. M., & Liu, D. (2005). Steps in theory-of-mind development for children with deafness or autism. *Child Development*, 76(2), 502–517. https://doi.org/10.1111/j.1467-8624.2005.00859.x

Wellman, H. M., & Peterson, C. C. (2013). Deafness, thought bubbles, and theory of mind development. *Developmental Psychology*, 49(12), 2357-2367. https://doi.org/10.1037/a0032419

Endnotes

[1]Neurodivergent children have differences in neurocognitive functioning. This includes autistic children, children with ADHD, language or literacy disabilities, Down syndrome, visual impairments, and cerebral palsy as well as those who are deaf or hard of hearing.

[2]A note on terminology: Person-first language refers to mentioning the person and then their disability (e.g., a person with autism), whereas identity-first language refers to the identity as a part of the person (e.g., autistic person). Different groups of people and different individuals have their own preferences for terminology. As a whole, deaf and hard of hearing individuals and autistic individuals generally prefer identity-first language, and so I will use their preferred language here.