NATIONAL CENTER for MONTESSORI in the PUBLIC SECTOR

Montessori as an Intervention for Children with Dyslexia

Key Points:

- Many aspects of Montessori reading instruction inherently help meet the needs of children with dvslexia.
- Various Montessori materials can be used to help students with dyslexia master phonics, syntax, and other aspects of written language.
- Montessori environments are language-rich and replete with opportunities for practice with decoding, increasing fluency, and improving reading comprehension.

Dyslexia is a biologically originated, language-based learning disability characterized by difficulties in accuracy and/or fluency in recognizing words as well as poor abilities in spelling and word decoding. Decades of research have shown that a primary cause of dyslexia is a deficit in the phonological processing of words. This deficit makes learning to read a challenging task for any child, even more so for dyslexic children as they struggle to autonomously identify new words² and become fluent readers. 3

To remediate these issues, a systematic, multisensory, cumulative, and sequential approach is recommended. Specifically, the intervention should provide explicit instruction in phonemic awareness, phonics (mapping letter sounds to letter symbols), English language structure, linguistic instruction, and strategies for decoding, encoding, word recognition, fluency, and reading comprehension.

Montessori Reading Instruction

Montessori teachers and classrooms are naturally equipped to provide all of the instruction required to effectively help students diagnosed with dyslexia. The structure of the Montessori work cycle and its mixedage environments also allow time for dyslexic students to more frequently practice activities that develop literacy skills with direct assistance from the teacher without any stigma. Additionally, Montessori students have explicit language instruction for at least three years prior to entering first grade compared to the one to two years children attending conventional preschools receive, though remediation lessons in Montessori elementary environments are easily given if necessary.

Phonemic Awareness. Primary (ages three to six) Montessori environments develop children's phonemic awareness through exposure to language in conversation, being read to, singing songs, storytelling, poetry, rhyming, language games, and sound games that highlight beginning, middle, or ending word sounds (i.e., a teacher holds an object in her hand such as a glass and says, "I'm thinking of something that starts with /g/, what is it?").

Phonics. At approximately three and a half years old, children in Montessori begin learning phonics utilizing the Sandpaper Letters⁹ with letters being presented from simple to complex. This is a multisensory approach involving visual, auditory, and tactile learning as children trace each letter with their fingers in the same direction as they would write it while saying its sound aloud. Research demonstrates that it is the act of tracing that helps to encode the sound, not just seeing how the letter is written; this also leads to better decoding and later reading skills. ¹⁰ Teachers also utilize the Three-Period Lesson¹¹ (This is a ______. Show me a _____. What is this? ¹²) to assess and reinforce students' encoding progress. Students can also practice creating letters and stating their corresponding sounds using other tactile materials such as a chalkboard. ¹³

This brief was prepared for NCMPS by Laura Flores Shaw, the founder and Editor-in-Chief of White Paper Press, a think tank specializing in translating scientific research into terms that allows people to make informed decisions about education and human development. For more information on the scientific basis of Montessori education visit http://www.whitepaperpress.us.

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Phonogram Work¹⁴ is also used to show how combined letters create unique sounds. Beginning at approximately four and half years old, children use their phonics skills to generate words provided first by the teacher and then on their own utilizing the Moveable Alphabet, ¹⁵ further reinforcing their phonics skills.

English Language Structure: Morphology, Syntax, Semantics, and Pragmatics. The Moveable Alphabet is also used to show how morphemes create words. Sentence Analysis¹⁶ and Function of Words¹⁷ exercises provide instruction on syntax during the kindergarten year. At the elementary level, the Grammar Boxes and Command Cards (which "command" the children to act out parts of speech) also teach syntax and vocabulary. Other materials such as the Phonetic Object Box¹⁸ and Reading Classification¹⁹ can be used in multiple ways to provide opportunities for children to practice decoding and build vocabulary. Read aloud time, storytelling, and discussing stories are activities that occur every day in Montessori environments at all levels to foster pragmatics, or rules for social language.²⁰ And, for children with dyslexia, these activities can be increased in either small groups or one-on-one with the teacher.

Linguistic Instruction. Interpretive Reading Cards, which increase in complexity, provide small amounts of text for the children to decode and explore meaning. Additionally, children have plenty of opportunities to practice reading aloud to either the teacher, assistant, or to peers with higher-level reading skills. This practice coupled with immediate feedback and discussion increases fluency and comprehension.²¹

Decoding, Encoding, Word Recognition, Fluency, and Reading Comprehension. All of the language activities described above, as well as additional materials not mentioned herein but included in the instructional repertoire of trained Montessori teachers, provide Montessori students with multiple strategies and rich repeated practice for decoding, encoding, word recognition, fluency, and reading comprehension at the preschool and elementary levels. They also involve multisensory opportunities to continually work on phonological processing, which is essential for children with dyslexia.

Overall, Montessori environments are rich in hands-on language activities, provide the flexibility necessary for repeated practice of such activities, and have teachers who are trained to adjust the pace of activities to suit the particular needs of each child. All of this makes Montessori an ideal intervention to help children with dyslexia become fluent readers.

Notes

¹ Lyon, G. R., Shaywitz, S. E., & Shaywitz, B. A. (2003). A definition of dyslexia. *Annals of Dyslexia*, *53*(1), 1-14. doi: 10.2307/23764731.

Torgesen, J. K. (2006). Recent discoveries from research on remedial interventions for children with dyslexia. In M. Snowlinng & C. Hulme (Eds.), *The science of reading: A handbook* (pp. 521-537). Oxford: Blackwell Publishers.

Vellutino, F. R., Fletcher, J. M., Snowling, M. J., & Scanlon, D. M. (2004). Specific reading disability (dyslexia): What have we learned in the past four decades? *Journal of Child Psychology & Psychiatry*, 45(1), 2-40. doi: 10.1046/j.0021-9630.2003.00305.x

² Share, D. L., & Stanovich, K. E. Cognitive processes in early reading development: Accommodating individual differences into a model of acquisition. *Issues in Education: Contributions from Educational Psychology, 1*, 1-57.

³ Linnea, C. (2002). Phases of acquisition in learning to read words and implications for teaching. BJEP Monograph Series II, Number 1-Learning and Teaching Reading, 1(1), 7-28.

⁴ Reid, G. (2009). *Defining Dyslexia* (Fourth ed.). Chichester, UK: John Wiley & Sons, Ltd.

⁵ Eunice Kennedy Shriver National Institute of Child Health and Human Development, N., DHHS,. (2000). Report of the National Reading Panel: Teaching children to read (00-4769). Washington, DC: U.S. Government Printing Office; Arkansas Department of Education, L. S., May 27 (Producer). (2015). Dyslexia.

⁶ Awes, A. (2012). Supporting the dylexic child in the Montessori environment. Communications: Journal of the Association Montessori Internationale, 1-2, 54-75.

- Richardson, S. O. (1997). The montessori preschool: Preparation for writing and reading. Annals of Dyslexia, 47(1), 239-256, doi: 10.1007/s11881-997-0028-4.
- Pickering, J. S. (1992). Successful applications of Montessori methods with children at risk for learning disabilities. Annals of Dyslexia, 42, 90-109. doi: 10.2307/23767994.
- ⁷ Montessori Primary Guide. (n.d.). Language training. Retrieved from
 - http://www.infomontessori.com/language/oral-language-language-training.htm
- ⁸ Montessori Primary Guide. (n.d.). Sound games. Retrieved from
 - http://www.infomontessori.com/language/written-language-sound-games.htm
- ⁹ Montessori Primary Guide. (n.d.). Sandpaper letters. Retrieved from
 - http://www.infomontessori.com/language/written-language-sandpaper-letters.htm
- ¹⁰ Bara, F., Gentaz, E., Colé, P., & Sprenger-Charolles, L. (2004). The visuo-haptic and haptic exploration of letters increases the kindergarten-children's understanding of the alphabetic principle. Cognitive Development, 19(3), 433-449. doi: http://dx.doi.org/10.1016/j.cogdev.2004.05.003
- ¹¹ Montessori Primary Guide. (n.d.). Three period lesson. Retrieved from http://www.infomontessori.com/sensorial/three-period-lesson.htm
- ¹² Pickering, 1992.
- ¹³ Montessori Primary Guide. (n.d.). *Chalkboards*. Retrieved from
 - http://www.infomontessori.com/language/handwriting-chalkboards.htm
- ¹⁴ Montessori Primary Guide. (n.d.). Phonogram object box. Retrieved from
- http://www.infomontessori.com/language/reading-phonogram-object-box.htm ¹⁵ Montessori Primary Guide. (n.d.). Moveable alphabet. Retrieved from
- http://www.infomontessori.com/language/written-language-moveable-alphabet.htm
- ¹⁶ Montessori Primary Guide. (n.d.). Simple sentence stage 1. Retrieved from
 - http://www.infomontessori.com/language/reading-simple-sentences-stage-1.htm
- ¹⁷ Montessori Primary Guide. (n.d.). Function of words. Retrieved from
 - http://www.infomontessori.com/language/total-reading-function-of-words.htm
- ¹⁸ Montessori Primary Guide. (n.d.). Phonogram object box. Retrieved from
 - http://www.infomontessori.com/language/reading-phonogram-object-box.htm
- ¹⁹ Montessori Primary Guide. (n.d.). Reading classification. Retrieved from
 - http://www.infomontessori.com/language/reading-classification.htm
- ²⁰ Awes, 2012.
- ²¹ Armbruster, B. B., Lehr, F., Osborn, J., O'Rourke, R., Beck, I., Carnine, D., & Simmons, D. (2003). Put reading first. Center for the Improvement of Early Reading Achievement (CIERA).