Maryanne Wolf

Unraveling the myths of dyslexia: Q&A with Maryanne Wolf

BY JEFNA M. COHEN

Maryanne Wolf is a scholar, teacher, and advocate for children and literacy. She is the director of the Center for Dyslexia, Diverse Learners and Social Justice at the UCLA School of Education and Information Studies. Her most recent book is *Reader, Come Home: The Reading Brain in a Digital World.*

In this interview, Wolf shares what she wants educators to know about dyslexia and how schools should teach to the strengths of students' widely varying brains to better reach all of them. She also happens to have personal experience with learning differences after raising her two boys, one with dyslexia and the other with dysgraphia.

What do you want educators to know about dyslexia?

There is no one dyslexia. There is, rather, a constellation of factors that can be rearranged in different ways, in different children, leading to the word *heterogeneity* [meaning that there is variation among people with dyslexia].

This is really important for every teacher to understand. It's not one thing. It is a difference in the brain organization that is usually genetically based and passed on. Teachers should be aware of the child's genetic history. The genetic component is usually there, but it is not always diagnosed.

There's no magic bullet that can "cure" or "overcome" it — words I hate. It is not a disease. It is not a handicap. It is not to be cured or overcome. It is to be addressed based on knowledge about the strengths and the weaknesses of the individual child that should be ascertained as early as possible.

It is also not the case that you can identify children with dyslexia because they make letter reversals [for example, writing a "P" with the loop to the left instead of the right]. All children make reversals. Some children with dyslexia make them longer than others. You can find many children who make reversals, and the last thing they need is a diagnosis of dyslexia [when what they really have is] a developmental slowness to their maturing processes.

The failure to learn to read has so long been associated with a weakness in either intelligence or industry, and by that I mean [it is] most frequently said people with dyslexia are just not smart enough to learn to read or they are not working hard enough. That is the most pernicious myth out there.

The reality is that this difference in brain organization came in our species long before literacy was invented. This is really important to understand. For us to survive as a species, nature or the creator gave us variation — people who have different strengths. This variation in the brain's organization is usually called something like "cerebral diversity."

What do schools need to do to identify dyslexic students?

You should be screening before the child enters 1st grade. At around [age] five, you should have as much information as possible. There are mandates now for this with a universal screener given at ages five and six. Importantly, it is not to be seen as a diagnostic but rather as a helpful profile of strengths and weaknesses for every child.

You can be multilingual and dyslexic, but we have to be able to tease those things apart by the strengths and weaknesses. In California, members of our UC/CSU Collaborative for Neuroscience, Diversity, and Learning are developing modules/videos that help train teachers to use these data to provide more targeted instruction and intervention.

We need differential intervention that matches the particular strengths and weaknesses of the child. We know that about 20% of kids, more or less, have pure phonological weaknesses (Ozernov-Palchik et al., 2016). For another 20% (approximately), their fluency — the speed with which the brain circuit gets its act together — is impeded in different possible ways. Yet most children with dyslexia have both of these issues and sometimes other impediments as well.

Heterogeneity is the reality. That said, some children have just a vocabulary issue. If you look at the whole language history of that child, you might see that it's not dyslexia, but a language impoverishment or a language impediment due to the fact that the child speaks three languages.

So at a minimum, every screener needs a phoneme awareness task, a rapid automatized naming task that predicts later fluency, and a vocabulary task as part of an entire screener that gives you data reflecting the different aspects that are precursors to reading — that may or may not indicate a risk for dyslexia (Norton & Wolf, 2012). Then you use that information in intervention and instruction in 1st grade for *all* children. Everyone benefits from this information.

Intervention is my particular area of expertise, and interventions are best when they're differentially going after the areas of weakness and when they are connecting the processes the reading brain is doing when making a circuit. That means our interventions have to be multicomponential. In this way, you are connecting the knowledge of phonemes to the knowledge of letter patterns, to the knowledge of the meanings of the words, to the knowledge of the functions of the words — to their syntax or how they are used in a sentence.

Many educators, though well-meaning, don't understand the reading brain requires multicomponents to be addressed in a connected fashion. You should not just address phoneme awareness in isolation without connecting it to the other pieces.

What are your thoughts about the science of reading?

The science of reading has been misinterpreted by some people. It's another myth that it is just about phonics or phoneme awareness. Yet another myth is that fluency is only about speed, rather than the sum of how automatic many underlying processes are. Thus, addressing fluency issues requires working on and connecting many aspects of language: e.g., semantics, syntax, and morphology.

Kids need help connecting the parts of the circuit. That's why you need both the systematicity of instruction in certain skills and the multicomponential, explicitly taught connections.

Another thing that's really important: You have to have evidence for the program used, and the evidence cannot be a publisher saying, "We are aligned with the science of reading." That's not evidence. I know this is going to be hard for some teachers to hear, much less the publishers.

We need randomized control treatment studies, if possible. I created a program called RAVE-O, which is multicomponential, and has evidence from randomized control treatment studies. Another program called Empower does as well.

Robin Morris, Maureen Lovett, and I compared a pure phonics program to what happens when you add RAVE-O to the phonics, and then what happens when you put RAVE-O and Empower together at 1st grade. The results show how multicomponential approaches help address the heterogeneity of readers with dyslexia by emphasizing the many processes in the early reading brain and aiding the speed of their connections.

The fact that the data for RAVE-O and Empower were better than with a phonics-only approach shows something wonderfully simple and complex at the same time: The more you know about a word, the better you decode and understand it. Our results are still overwhelming to me — effect sizes of 0.99 (Lovett et al., 2017). You can't get higher than that.

Do you have any final thoughts for our readers?

For the balanced literacy teachers who have such expertise in vocabulary and literature, I hope that you will not be on the defensive; you have not wasted your life. For some of the science of reading advocates, they need to expand their excellent work on phonics to understand that all of these components are foundational, not just phonics and phoneme awareness.

In other words, we all have much to learn. Our interventions need to be not just foundational, but also involve stories, text, and vocabulary. The science of reading teachers need to expand, be systematic, and be just as good as they are, but also use the expertise of the balanced literacy people to develop what I call "deep reading" as the foundational processes become more automatic. The [goal is to] "expand systematically and connect." That's what I want everybody to do.

REFERENCES

Lovett, M.W., Frijters, J.C., Wolf, M., Steinbach, K.A., Sevcik, R.A., & Morris, R.D. (2017). Early intervention for children at risk for reading disabilities: The impact of grade at intervention and individual differences on intervention outcomes. *Journal of Educational Psychology*. psycnet.apa.org/manuscript/2017-13234-001.pdf

Norton, E.S. & Wolf, M. (2012). Rapid automatized naming (RAN) and reading fluency: Implications for understanding and treatment of reading disabilities. *Annual Review of Psychology, 63*(1), 427-452.

Ozernov-Palchik, O., Norton, E.S., Sideridis, G., Beach, S.D., Wolf, M., Gabrieli, J.D.E., & Gaab, N. (2016). Longitudinal stability of pre-reading skill profiles of kindergarten children: Implications for early screening and theories of reading. *Developmental Science, 20*(5), e12471. doi.org/10.1111/desc.12471

•

Jefna M. Cohen (jefna.cohen@learningforward.org) is associate editor at Learning Forward.