

3 Ways Poverty Impacts Children Learning to Read

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“Reading is a luxury,” says Dr. Martha Burns, director of neuroscience education at Scientific Learning Corporation. This is a powerful quote when it comes to understanding the impacts of poverty on children learning to read. Research tells us that children who come from homes in poverty are often not ready to learn to read due to the impacts poverty has on how their brains develop.

Let’s explore the reasons for this.

The Poverty Trifecta

According to Dr. Burns, there are three major factors that adversely impact learning and reading on children who come from homes of poverty.

Factor #1: Children from homes of poverty do not have as much exposure to language.

Frequently cited research by Hart & Risley (1995) found that there is a 32-million word gap in students who come from homes of poverty. They simply do not get as much language exposure as peers from homes of higher income levels. This affects development of oral language at early ages, so that by the time these children enter our classrooms there is already a significant difference in how they are able to understand, respond, and be ready to learn.

Factor #2: Poverty changes the way the brain matures.

We can agree that all children have the capacity to learn. Experience in the world drives this learning and affects the development of the brain. What does the world of a child in poverty look like? We don’t always know the answer to that question because many factors can be at play. However, neuroscientists have studied the brains of children from different income levels, controlling for variables, and have identified significant differences in the brain maturation of children in poverty. Findings have shown:

- Differences in the frontal lobe, affecting cognitive control and self-control (in the classroom, this translates to paying attention, listening, and learning on-demand)
- Differences in the occipital lobe (important for spatial skills)
- Differences in working memory, impacting the ability to: listen and think about what someone is saying, read a book and remember parts of what has been read, and organize thoughts to formulate written language

The brains of children in poverty mature differently based on experience. They bring these differences with them to the classroom.

Factor #3: Children who come from poverty experience high levels of stress.

Stress? We all experience stress — it's just part of life! At some point, we all experience and must learn to manage stress. However, stress that is chronic, out of your control, or experienced without support becomes toxic stress. Children in poverty often experience toxic stress, also affecting brain development. Neural pathways responding to stress such as fear and anxiety may overdevelop, while other pathways for things such as reasoning, planning, and learning develop more slowly based on the child's experiences.

Educators can influence change

Educators know that third grade marks a critical milestone for students. The learning emphasis shifts from learning to read to reading to learn. Students who are not proficient in reading by the third grade as measured by standardized tests are at higher risk of either graduating late or not at all. The research on children in poverty show that not only are these children more likely to have low reading test scores in third grade, they are less likely to graduate from high school at any reading skill level. These students truly present a challenge to educators. How can we improve outcomes? Know that we have the power to influence positive brain changes through the practices and attitudes we employ in the classroom.

- **Health and Nutrition.** Set the brain up for success! Children who live in poverty can lack basic health care and nutrition. Programs that provide meals for students in turn support cognitive skills such as attention. Recess and physical education programs promote good oxygen intake and blood glucose levels, benefitting the brain and subsequent learning. School health screenings can help identify vision or hearing problems that impede learning and may otherwise go undiagnosed.
- **Believe in students who may not believe in themselves.** “Lazy” is a tough word. It implies that a child just doesn't care. The truth is children may be unmotivated due to lack of hope and optimism that can stem from toxic stress. Furthermore, these students may see the future as hopeless and their situations as fixed. We must help lead students away from a “good” vs. “bad” or “smart” vs. “dumb” perspective and teach them that change is possible.
- **Build relationships.** Let's recall the impacts of toxic stress on the brain. A child who has lived in a state of fear and anxiety has likely developed a significant fight-or-flight response. In homes of poverty, studies have shown children commonly get twice as many reprimands as positive comments (Risley & Hart, 2006). Strong, positive, and caring educators help children build trust in adults. We can further motivate learning by making an effort to understand children's unique backgrounds and incorporating their interests.

- **Target vocabulary and cognitive skills.** Remember that these children typically have significantly less language exposure than their peers. Use vocabulary building activities to introduce and use new words that appear in classroom and reading materials. This supports comprehension. Recognize how differences in early brain maturation may play out in the classroom. Deficits in executive functioning skills make it difficult for a child to attend, listen and learn on-demand. Teach students core academic skills such as how to organize, prioritize, and remember key ideas.
- **Supplement instruction with neuroscience-based interventions.** If anything teaches us that the brain can change, it is the study of neuroscience. Neuroscientific interventions offer a supplement to the work of educators in the classroom. Programs such as Fast ForWord[®] target core skills to include attention and working memory. fMRI and efficacy studies of students who have completed 6 weeks of the Fast ForWord[®] program have demonstrated significant gains in reading skills and underlying cognitive skills as compared with children with no intervention, even among students at a secondary level. Neuroscientific interventions are a great option to support reading development for these students.

The takeaway message is that we can positively influence reading and learning skills in children from homes of poverty by understanding their brains. With this knowledge, reading can become a luxury we can all afford!

References:

[The Effects of Poverty on School Success - Webinar](#)

[How Does Poverty Influence Learning?](#)

[How Poverty Affects Classroom Engagement](#)

[Double Jeopardy: How Third-Grade Reading Skills and Poverty Influence High School Graduation](#)