



Topic:

Latency to learn: Young children with disabilities or at-risk for delays often take longer than other children to learn the connection between something they do and a rewarding response.



Don't give up! A baby with disabilities or a child at-risk for delays will take longer to learn that when she pushes this toy's colorful buttons, she'll be rewarded with interesting and pleasing sounds. But be patient ... she *can* learn it!

No Rush!

Research proves it pays to be patient

Have you ever locked your keys in the car? What a hassle! A locksmith must be called (or a coat hanger found and cleverly manipulated!), appointments must be postponed, and patience can fly out the window. Many folks who have this experience immediately learn the value of stashing a spare set of keys in a purse, pocket, or some other handy spot. Others of us take a bit longer to exercise this “ounce of prevention,” and we delay buying a spare key until our absentminded behavior leaves us yet again staring through a locked car window at keys dangling from the ignition switch.

In much the same way, children with disabilities or developmental delays tend to take longer to learn from their experiences, including experiences that pair a child's production of a behavior with interesting, rewarding responses.

Melanie Hutto, Ph.D., of the Research and Training Center on Early Childhood Development, examined research on this type of infant learning—that is, infant “operant” learning in which child behavior is quickly followed by a rewarding response—to uncover the relationship between the degree of developmental delay and the length of lag time between when a baby is exposed to operant learning and the time the behavior in question is learned and demonstrated. Dr. Hutto found that while children without disabilities realize almost immediately the connection between their performance of a behavior and a response that follows it, children with disabilities are slower to understand that they are making something happen. In other words, there is a “latency to learn” among children with or at-risk for delays. Her examination of a large body of this research shows that parents and practitioners would do well to *be patient* when providing operant learning ▶

Research tells us:

Although slower both to learn and to show that they have learned new behaviors, most young children with disabilities enjoy learning new behaviors that are tied to interesting, consistent, rewarding responses.

This kind of learning—called “operant” or “contingency” learning—is especially appropriate for children functioning developmentally between the ages of 2 months and 8-to-10 months.

Acting on the evidence:

Create simple learning games that reinforce a young child's actions with consistent, engaging responses (most effectively, nonsocial responses like the sight and sound of a musical toy). Remember, if arm/hand movements are too difficult, focus on other actions.

When working with young children with disabilities, expect and don't be disheartened by the significant time that can pass between when they first participate in the behavior-response activity and when they learn the behavior and then between learning the behavior and showing they've learned it.



When I lift my bib, Mama says, “Peekaboo!” What fun! It happens every time!

opportunities to young children with or at-risk for delays because, despite the time lag, they *DO* learn and enjoy learning this way.

Dr. Hutto evaluated research spanning more than 40 years, focusing on 16 studies that included 73 participants with developmental ages up to 18 months. When evaluated as a whole, the research says three important things to parents and early childhood practitioners working with children with or at-risk for developmental delays:

■ **Pairing child behaviors with rewarding responses is especially recommended for children functioning developmentally between 2 months and 8-to-10 months of age.**

■ **Children with disabilities, especially children with physical or multiple disabilities, need to be given extra time to learn or realize the connection between their behavior and the response it brings. The bottom line: Don't give up too quickly!**

■ **Children who are older and have more significant developmental delays are likely to take longer to learn the behavior-reinforcement pair. Reinforcers should be delivered as quickly as possible after the child produces the behavior.**

Let's watch one dad put these findings into practice:

"Mama's taking a nap now, Maleek. Time for 'the boys' to have us some fun," says David, settling onto the living room carpet with his 7-month-old son.

David and his wife, Maya, have set up an interesting play space on one side of their living room to help Maleek, who has severe cognitive and physical disabilities, learn more about how moving in different ways can cause interesting things to happen.

David places Maleek on his back, his head resting on a small pillow. Just to the baby's right, a shatterproof mirror is propped against the wall, so that when Maleek turns his head that way, he's always rewarded with a close-up view of a handsome baby—his own reflection! To his left, a battery-powered teddy bear waits to nod



This little fellow learns he'll hear a bell ringing and a bright "Hello!" each time he presses a button on the toy telephone. The response is so entertaining he's happy to press again and again.

and sway to the clear sounds of sprightly children's songs. The control for the bear is a simple pressure pad David has tucked beneath the pillow. By turning his head to the left, Maleek presses the pad and triggers the bear's engaging performance.

For several play sessions, David stretched out on the floor to Maleek's left, his face near the baby's, and called gently, "Look here, Maleek! Look at this bear!" Then he would help the baby turn toward his voice. Maleek was instantly rewarded by the sight and sounds of the music-making bear.

For a while it felt like it might take forever, but David's patience was rewarded, and Maleek learned the connection between his head turning and the delightful reinforcers. Now he turns quickly to the left and chuckles as the little bear sways to a jingly version of "Old McDonald's Farm."

Take another look!

Read or download the complete research synthesis in the *Bridges* section of www.researchtopractice.info:

Hutto, M. D. (2003). Latency to learn in contingency studies of young children with disabilities or developmental delays. *Bridges*, 1(5).

Exciting print, web-based and multimedia materials of interest to parents and early childhood practitioners are available from the Center for Evidence-Based Practices. To order by telephone, please call 800-824-1174.

