



Playful Learning

An excerpt from *Shared Discoveries: positive parent-child relationships and child development*

Decades of research have explored the multi-faceted benefits of play for children of all ages. Young children start to play with each other in early toddlerhood, and peers and parents are important to the development of different types of play including cooperative play, pretense and physical play.

A recent study by Elizabeth Bonawitz and her colleagues provides experimental evidence to support the benefits of play and exploration in a teaching environment.

The researchers found that children in the Pedagogical condition played with the toy for significantly less time and performed fewer kinds of different actions on the toy than children in the Naïve condition. That is, direct instruction made the children less curious and less likely to discover new information. These findings provide important insights for teachers and parents on how to balance direct instruction and exploration in the context of play.

“The truth is that play seems to be one of the most advanced methods nature has invented to allow a complex brain to create itself.”

Stuart Brown, M.D.

Ways to support children’s learning through play:

Allow children to explore a new toy and show you how it works. Resist the urge to demonstrate how the toy works: let them take the driver’s seat when they interact with a new toy. Encourage them to figure out the different functions of the toy by asking questions like, “I wonder what this does?”

Encourage pretend play in all ages, especially toddlers and preschoolers when children naturally want to engage in fantasy play and create imaginative worlds. Think big and small—create a play space in a big empty box or design a tiny world in a shoebox. Provide materials to create with, space to get messy, and time to explore and discover. Remember that play is not only good for kids, but for adults too, so take every opportunity to join the tea party or sail away on a pirate ship.

To read *Shared Discoveries*, please visit: CenterforChildhoodCreativity.org/research/

Bonawitz, E., Shafto, P., Gweon, H., Goodman, N. D., Spelke, E., & Schulz, L. (2011). *The double-edged sword of pedagogy: Instruction limits spontaneous exploration and discovery. Cognition, 120(3), 322-330.*

The double-edged sword of pedagogy

Bonawitz et al. introduced preschoolers to a novel toy with four tubes. Each tube could do something interesting (e.g., tube squeaked when you pulled on it).

<p>1. In the Pedagogical condition, the experimenter clearly conveyed to the child that she knew how the toy worked (“This is my toy. I’m going to show you how my toy works.”), and then demonstrated one function of the toy.</p>	<p>2. In the Naïve condition, the experimenter conveyed to the child that this was her first experience with the toy (“I just found this toy!”) and “accidentally” pulled one of the tubes to make a squeaking sound (“Huh! Did you see that?”).</p>	<p>3. Bonawitz et al. found that children in the Pedagogical condition played with the toy for significantly less time and performed fewer kinds of different actions on the toy than children in the Naïve condition.</p>

NOTE: In both conditions, the experimenter then let children play with the toy until they indicated they were done.

Implication: Avoiding direct instruction can make children more curious and more likely to discover new information.



Creative thinking begins early in every child’s life. It enables original thought and the ability to see solutions where others don’t. It unlocks possibilities and fosters innovation. It provides the fundamental building blocks for success in school and beyond.

The mission of the Center for Childhood Creativity is to ignite and advance creative thinking for all children.