

Discussion Guide for Module 18

Learning to Make Things Happen: How Children Learn Cause-and-Effect in Early Childhood

Module run time: 25 minutes

Estimated time to complete the module with discussion guide: 45-60 minutes

Below are recommended stopping points and suggested questions to use in your group's discussion. Please feel free to follow your group's lead and discuss topics and questions that are of greatest value to the group!

Key points:

- In the first year of life, babies already start to make predictions about what things are causes and what are effects. By the time they are in preschool, children are proficient causal learners, ready to engage in and learn from causal lessons.
- Children of all ages learn how to make things happen on their own from watching what other people do. They do this even if the people they are watching make mistakes or things don't work perfectly.
- Cause-and-effect relations also occur between living things. Figuring out how to cause people to change their behavior is important for children's social development.
- Lessons about cause-and-effect happen at home and in the classroom all the time, with little or no need for special tools, toys, or preparation.

Module synopsis:

Page 1: *Title Page – Learning to Make Things Happen: How Children Learn Cause-and-Effect*

Page 2: *Acknowledgments*

Page 3: *What is Cause-and-Effect?*

Page 4: *Children's Causal Knowledge*

Page 5: *Social Cause-and-Effect*

◊ Recommended stopping point

- Take a moment to think about different cause-and-effect relations in your daily life. Try to think of 2 or 3 examples of cause-and-effect relations between physical objects. Now think of 2 or 3 examples of social cause-and-effect relations between people. For each cause-and-effect relation try to label what is the cause and what is the effect.
- Now consider each of the cause-and-effect relations that you listed from the perspective of a young child. What do those relations look like to children? Is the cause or the effect out of reach or out of sight?
- Have your children or the children you work with ever talked about cause-and-effect? Have they ever thought something would happen when it didn't? Or thought that something caused something to happen when it was really something else? For example, if a child pulls at the door of a car while their parent is pressing the key fob, that child might announce that they made the door open. Think about what causal knowledge your children or the children you work with have already demonstrated through their actions and verbalizations.

Page 6: *Intervention: Sign of Causal Learning*

Page 7: *Intervention: How Science Happens*

☞ Recommended stopping point

- **Intervention**, an action taken on something with the goal of bringing about an effect, an important part of causal learning. What different interventions have you seen your children or the children you work with make?
- When you hand a child a toy, what actions do they take? Consider how those actions might reflect their causal beliefs. If a child always shakes a toy when you hand them a toy for the first time, this might reflect their belief that many toys make sounds.

Page 8: *How Children Learn Cause-and-Effect: Their Own Trial-and-Error Actions*

Page 9: *How Children Learn Cause-and-Effect: Space & Time Cues (video)*

Page 10: *How Children Learn Cause-and-Effect: Observation*

Page 11: *Toddlers Do It: Video Introduction*

Page 12: *Toddlers Do It! (video)*

Page 13: *Older Children Do It Too: Video Introduction*

Page 14: *Older Children Do It Too! (video)*

☞ Recommended stopping point

- Think about the different ways in which you teach children either at home or in the classroom. When do you use demonstration to show a child how to do something and when do you leave them to discover it on their own through trial-and-error? How do you decide which way to teach?
- Reflect on the different cause-and-effect relations you listed earlier. How long would it take to learn each by trial-and-error? Is it something that is easy to stumble into? Or do you think it would be faster to learn by observation?
- Consider your own causal learning. Which cause-and-effect relations have you learned on your own, through trial-and-error, and which have you learned by watching others first? What were the benefits of each learning process? Are there certain cause-and-effect relations that would be more or less difficult to learn one way or the other?

Page 15: *When Causes Fail*

Page 16: *When Causes Fail (video)*

☞ Recommended stopping point

- Throughout their lives, children will encounter many things or situations that don't work the way they expected them to. This can be a frustrating experience for a child, but it is also an excellent causal learning opportunity. When something doesn't work the way you expect it to, what do you do? How do you try to fix it or solve the problem?
- What are some cause-and-effect relations that might not work the way children expect them to?
- What are some strategies you can use to support children as they work through solving a problem?

Page 17: *Causes in the Real World*

Page 18: *Labeling Causes and Effects*

Page 19: *Causal Explanations*

Final discussion points

- What role does cause-and-effect play in the daily life of young children? How does that compare to your own? What are the similarities and differences?
- Think of some games you can play with your children or the children in your classroom to highlight cause-and-effect relations and the role that they play in daily life. The module provides some examples, but see if you can come up with one of your own. Share your ideas with others!

To learn more about how children learn about cause-and-effect, take a look at these resources:

Read more about the science of developmental causal learning in this book:

http://www.goodreads.com/book/show/711188.Causal_Learning

Learn more about how children develop an understanding of cause-and-effect between birth and 36 months:

<http://www.cde.ca.gov/SP/cd/re/itf09cogdevfdcae.asp>

Learn more about how children gather evidence from the world and make decisions in this Ted Talk by psychologist Alison Gopnik:

https://www.ted.com/talks/alison_gopnik_what_do_babies_think

Watch this Ted Talk by cognitive scientist, Laura Schulz as she discusses very young children's incredible logic skills:

https://www.ted.com/talks/laura_schulz_the_surprisingly_logical_minds_of_babies

This page has some simple activities related to teaching a child about cause-and-effect in everyday life:

<http://www.readingrockets.org/article/cause-and-effect>

We are constantly working to improve our materials. Do you have suggestions about topics to add to this guide? Did your group discuss something we didn't suggest? We'd love to hear from you! Please email your thoughts to us at ilabsout@uw.edu.