Keeping Parents Informed about Research

The Research Spotlight section of the monthly newsletter is one way Children’s School parents can learn about research in progress. Also, each time your child participates in a study that involves playing a “game” with a researcher (i.e., as opposed to merely being observed), he or she will get a participation sticker suggesting that you, “Ask me about the … game” and a study description detailing the task. We also have recent articles resulting from Children’s School research posted on the Family Bulletin Board, and a notebook of additional articles in the office.

Observations for Psychology Assignments: Students from Dr. David Rakison’s Child Development class will be doing periodic observations this fall. For each assignment, they observe specific differences between preschoolers and kindergartners in motor skills, social interactions, etc.

Research Methods Class Studies: Student's in Dr. Erik Thiessen’s Research Methods course will start with a lab to explore whether teaching children to subdivide a number line will help them better understand the relative size of numbers. Then they will work in groups to conduct a study of their own design, which will be approved both by their teacher and by Dr. Carver.

Feel free to contact Dr. Carver to discuss any questions you have about research.

Research Spotlight

The Curiosity and Question-asking Game

Jamie Jirout, a graduate student working with David Klahr, is studying young children’s curiosity and question-asking behavior. The goal of this project is to investigate the relationship between children’s curiosity and their ability to ask questions in order to solve problems or learn about a science topic. In this study, children play several games in two sessions. One session includes computer games, and the other session includes hand-on games. There are two computer games. The first of these games allows children to explore underwater in a submarine to see different kinds of fish. Children choose what to explore when presented with different amounts of information about what they will see, and we use children’s preferences of what to explore as an indication of their curiosity. The second computer game involves children watching a short video about a science topic, and then generating questions to learn more about that topic. There are three hands-on games. In one game, children ask questions to identify a specific picture from an array of similar pictures. This game is similar to “Guess Who?”, but with pictures such as bees or leaves instead of people. In another game, children identify helpful and not helpful questions when trying to solve a mystery. In the third game, children explore a novel toy and try to discover what it is, what it does, and how to play with it. Sessions are tape-recorded so that full attention can be given to each child during the game. The value of this study is to advance our understanding of what motivates children to explore, and to identify ways that educators can use this understanding to design lessons and classroom activities.
Research Spotlight continued …

The Finding Game

Dr. Anna Fisher’s research team, including graduate student Bryan Matlen and undergraduate Naomi Shah, are studying how linguistic labels affect children's generalization of knowledge. In this game, children are shown three objects and asked to select two objects that “go together.” Two of the objects are thematically related; whereas, one object is unrelated to the other two. For example, children might be shown a picture of a castle, a king, and milk and be asked to choose the two items that best go together. In a previous study, these researchers used items that they considered to be thematically related. In this study, they are simply assessing whether children also view these items to be thematically related.

The UP or DOWN Magic Game!!!

Lauren Lorenzi is a research assistant working with Drs. Mayu Nishimura and Marlene Behrmann (Department of Psychology) to examine the development of face and object recognition. Recognizing faces is an important social skill, and adults have a remarkable ability to recognize and discriminate many faces. In particular, adults have an amazing sensitivity to the spatial relations among facial features, such that adults can notice a change in eye position (e.g. moving the eyes closer together) in a photograph within a few pixels! This study examines how this skill develops by comparing the ability of young children to older children and adolescents. Children will be told that a tricky wizard has changed our photographs, so that the eyes of a face are in the wrong place. We need children to help us out by sorting each photograph into bins of “eyes too far up” or “eyes too far down”, so that we can use the appropriate magic to move the eyes back to their original positions. This game will be repeated with photographs of dominos (dots too far up/down), and houses (windows too far up/down), to examine how this visual ability develops with age, and whether it develops specifically for faces (because faces provide important visual information to interact successfully with others) or more generally for all objects.

Training Pictures:  

| UP | HAPPY | DOWN |

Test Pictures:  

| Up or down? | Original | Up or down? |
Research Spotlight continued …

The Deer or Tear Game

Dr. Dan Hufnagle and Dr. Lori Holt are investigating how children learn sound categories. The children hear a story about a friendly space alien who is learning how to say words correctly. The children help the alien learn how to say deer and tear. Then, they hear those words many times, and are asked to tell the experimenter which word they hear. Sometimes the sound is ambiguous (acoustically between “deer” and “tear”). We are testing children at several ages to understand how they learn the cues that make up sound categories (like “d” and “t”) and how those categories develop across time. The answers will help us understand the nature of auditory perception and language development.

The Listening Game

Research Assistant Malika Sinha, who works with Dr. Anna Fisher, is investigating how young children learn synonyms. The researchers are particularly interested in examining how factors such as co-occurrence in child directed speech (e.g., bunny-rabbit) influence how children learn synonyms. In addition, they are exploring whether children are able to use their knowledge of synonyms in order to solve reasoning problems. In this study, children listen to audio recordings of word pairs (co-occurring synonyms, like rock-stone, or non co-occurring synonyms, like rock-cup) while engaging in a task such as coloring a picture or building a puzzle. At the end of the session, children will complete a variety of reasoning tasks requiring them to rely on their knowledge of synonyms in order to solve the problem. The researchers are interested in the degree to which children utilize their knowledge of synonyms in various reasoning tasks. Parents will receive separate descriptions for each of the reasoning tasks used.

The Classroom Game

Karrie Godwin, a graduate student working with Dr. Anna Fisher, is starting a longitudinal study of children’s selective attention. The purpose of her study is to investigate how children allocate their attention in learning environments. She is particularly interested in examining how physical features of the environment (e.g., toys, posters, art work, etc.) can contribute to or hinder kindergartners’ ability to attend to the content of a lesson, and she is examining whether children’s ability to effectively distribute their attention has consequences for learning new content. The researchers are teaching children 15 mini-lessons in a small group format. For 10 of the lessons, the physical environment includes items that are typically found in early childhood classrooms that may be potential sources of distraction (e.g., posters, artwork, manipulatives, etc.). For the remaining 5 lessons, the physical environment only includes visual aids and materials directly relevant to the lesson. Each lesson lasts approximately 10 to 15 minutes. During each lesson, children listen to a short story and answer questions about the content of the story. For example, they might listen to a story about plants and then be asked to circle the picture, from among four choices like those above, that they saw in the book.