Research Spotlight:
Undergraduate Researchers in Training

The Animals Game

The students in Dr. Anna Fisher’s *Developmental Research Methods* class are investigating how different materials may affect children’s performance on a counting task. Educators commonly use engaging, perceptually rich objects when working with young children. For example, when working on early counting skills, a child may be asked to count different kinds of objects, such as popsicle sticks (objects that are not perceptually rich) or toy animals (objects that are perceptually rich). Prior research shows that choosing engaging objects to motivate children (when working on new challenging skills) may have unanticipated costs to children’s performance if children get distracted by the object properties that are irrelevant to the task at hand. This study aims to further investigate whether perceptual richness per se or high perceptual variability among objects pose difficulty to young children when performing a counting task.

In the study, each child plays the game twice. One time, children are asked to give a certain number of objects to the experimenter from a set of objects that are high in perceptual richness but low in perceptual variability (10 small plastic penguins that are subtly different from one another). Another time, children are asked to give a certain number of objects to the experimenter from a set of objects that are both high in perceptual richness and in perceptual variability (5 pairs of different kinds of animals). By trying to more precisely understand what properties of perceptually rich materials might be particularly challenging for young children to handle, this study aims to provide useful information to parents and educators so that efforts to motivate children do not come at a cost to children’s performance.

Final Projects

These undergraduates are also working in small groups to prepare their final projects for the semester. Though the research protocols are still being developed, the students are planning to study many educationally relevant early childhood tasks. Discovering the impact of the variables studied on children’s learning can help adults better choose approaches for supporting their progress.

• **The Playdough Game** – Exploring whether Preschool 4’s and Kindergartners are more likely to take implicit instructions about play activities from an adult or a peer.

• **The Spot the Difference Game** – Testing whether earning small rewards intermittently during a task is more motivating for Preschool 4’s and Kindergartners than one large reward at the end.

• **The Goldfish Game** – Investigating whether 3, 4 and 5-year olds are better able to delay gratification (wait for more goldfish crackers) when they are offered an interim drawing activity.

Families whose children participate will receive fuller parent descriptions via the child’s backpack. Everyone can read the study descriptions on the Research Bulletin Board to the left of the Children’s School office. What an interesting set of developmental psychology topics!