Research Spotlight

Dr. Erik Thiessen’s Developmental Research Methods students are preparing their final projects for the semester. Though the research procedures are still being finalized, the topics are listed below. 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 outside the Children’s School Office. What an interesting set of important topics in early childhood development!

**Effect of Music Emotion on Children’s Story Themes** – Exploring whether kindergartners exposed to sad background music will tell different types of stories about a neutral picture than those exposed to happy music. (The Picture Story Game)

**Effect of Music Tempo on Children’s Self-Control** – Determining whether energetic or calm music better enables 3 and 5-year-old children to delay gratification. (The Goldfish Game)

**Direct Instruction vs. Discovery Learning** – Testing whether kindergartners learn better puzzle solving skills from direct instruction or discovery learning. (The Puzzle Game)

**Effect of Experience on Sensitivity to Prototypic Faces** – Exploring whether 3 and 5-year-old children are differentially sensitive to prototypic faces of their own ethnicity. (The Face Game)

**Impact of Prosocial Priming on False-Belief Judgements** – Testing whether 3 and 5-year-old children are better attuned to the appearance-reality distinction after a prosocial task.

**Gender Effects on Executive Control Tasks** – Testing whether male or female 4-year-olds are better able to inhibit ineffective actions when guided by same or different gender experimenters.

The Fruit Basket Game

Vivek Pai, a senior in the Information Systems department is conducting his senior thesis with the guidance of Professor Raja Sooriamurthi. His goal is to determine whether children will learn more from computer games when the system monitors the user’s expression and adapts the game sequence to the expressed emotion than if it follows a traditional prescribed sequence of progressively harder tasks. Vivek programmed the computer game during our Healthy Mind & Body unit, so he used the cover story of fruit falling from the sky and the user catching it in baskets matching the color of the fruit. Initially, the there are only two colors of fruit dropping in only a few locations, but gradually the number of colors, thus number of baskets, and the number of drop locations increases, and the pairing of colors with locations become random instead of predictable. For children in the control group, the game advances as the children’s accuracy improves and goes back to an easier level when the child struggles. In the affect-mediated experimental condition, the game advances while the child’s face displays positive affect and reverts to an easier level when emotions of worry or frustration are detected. In addition to testing the feasibility of accurately monitoring children’s expressions during computer game play, Vivek will compare the learning paths and final scores of children in the experimental and control conditions to see which yielded better performance.
Research Spotlight, continued …

The Story Game

Graduate Student, Karrie Godwin and her advisor, Dr. Anna Fisher, are investigating how children allocate their attention in learning environments. In particular, they are interested in examining whether children’s ability to effectively distribute their attention has consequences for learning new content and for retention of learned material. To answer this question, they are investigating the role of divided and sustained attention on children’s long-term memory. In this study, they will examine whether children’s ability to engage in sustained attention during a short lesson affects children’s long-term retention of the lesson content. In this game, your child will be asked questions about several stories that they heard during prior research sessions. For example, if your child listened to a story about muscles and bones, your child may be asked questions similar to the example here.

Undergraduate Spotlight

Emily Gibson writes, “I love my life at Carnegie Mellon. It can be stressful, but it’s a challenging and rewarding place where I get to do the things I love. I am a sophomore in the BHA program (Bachelor's of Humanities and Arts), and I study dramaturgy and history. I’m also pursuing degrees in English Studies and Creative Writing, which means I’ve always got a full plate of course work to manage. It also means that I spend a lot of time in the library! I am hoping to work in theatre as a dramaturg, literary manager, or artistic director, but I’m interested in museum work and education as well. Of course, it wouldn’t be much fun if I only did academics. I have a lot of other things to keep me busy between classes and homework. I am a flutist in the CMU Kiltie Band; a member of the activist group Life Matters; and the president of the newly formed Carnegie Mellon (Muggle) Quidditch Club, for which I also play the positions of Beater and Chaser. I’m currently a writer for TheaterMania, where I have a personal column, and I have two part-time jobs: one at The Waffle Shop in East Liberty, the other at The Children’s School.

I started working at The Children's School in my first semester at CMU, and it has been a great opportunity for me. I love working with children, and the environment is so relaxed and friendly. I also spend a lot of time in the office, which is a different kind of fun all together, but one that has given me experiences I know I'll use in internships and jobs to come. I consider myself really lucky to have stumbled upon the school as a freshman, because every day that I see the children, I learn something new and I have the chance to be amazed by how brilliant, funny, and kind they all can be -- and that is more than I could have asked for from a work study job.”

Dr. Carver adds, “Notice how well Emily exemplifies the skill of ‘taking on challenges’, which is the subject of my Director’s Corner this month. Thanks for being such a great model, Emily!”