Hello from the KID Lab at Michigan State University!

This is an update on research projects that have been conducted at the Knowledge in Development Lab under the direction of Dr. Judith Danovitch over the past year. Our lab is very excited to celebrate its two year anniversary this fall. We could not have succeeded without the help of the parents, children, and educators in our community. We have enjoyed working within the community very much and your involvement has provided us with a better understanding of how children develop.

What is the Knowledge in Development Lab?

The Knowledge in Development Lab is located on Michigan State University’s campus within the Department of Psychology. Graduate and undergraduate students conduct experiments in order to gain a better understanding of how children process information, how they seek out and evaluate knowledge throughout their development, and how such thought processes develop.

The lab primarily works with children between the ages of 2 and 12. A visit to our lab entails one session, scheduled by the parent, lasting no longer than half an hour, where the children complete a game or activity with our friendly researchers. Our research rooms are located just outside our waiting room where parents can observe the interaction through our video monitoring system. At the end of each session, children receive a prize as well as a free pass to the Impression 5 Science Center.

When a study is complete, we analyze the differences in thinking between children of different ages and we publish the results so that they are available to other scientists, parents, and educators.

Meet Dr. Danovitch

Dr. Judith Danovitch is a professor in the department of Psychology. She received her BA in Psychology and Biology from Harvard University and her PhD in Psychology from Yale University. When she is not conducting research or teaching Developmental Psychology courses at MSU, she enjoys reading and traveling with her family.
Experts Know Best
Participants: Preschool students ages 3 - 5

This study investigates how children reason about knowledge and expertise. Specifically, we examine whether children believe that the ease of learning a topic is related to a person’s level of expertise in a subject. We also examine whether children assume an expert in one area will be an expert in other areas.

To address these questions, we present each child with two puppets. One puppet is described as an expert on dogs, while the other is a person with no specific expertise. The children observe the puppets “learning” about an area of interest. This area of interest is either related (cats) or unrelated (cars) to the expert’s area of expertise, and the children are then asked a series of questions about who they think learned the new information better.

Our results show that children seem to be more likely to think that the expert will know about related topics, and that the non-expert will know about unrelated ones. The data has implications for children’s attitudes about education and, specifically, how children judge what kinds of things will be easier or more difficult for them to learn.

Student researchers: Meghan Kanya and Courtney Sharp

Trusting Familiar Characters
Participants: Children ages 4 and 5

The “Trusting Familiar Character Study” examines how familiarity affects children’s decisions when dealing with information from popular cartoon characters.

Preschoolers are shown a set of popular animated characters (Dora the Explorer, Bob the Builder, Nemo, and Blue) and are asked to select their favorite. Their favorite character and a novel character, both similar in appearance, make statements about novel concepts. The child is asked to endorse the statements of one of these characters. Next, children hear one character make obviously incorrect claims. A second set of questions is then asked to determine whether a character’s inaccuracy affects the child’s endorsements. In part two, children choose between two objects that are the same except one is new and the other is damaged but features an image of their favorite character.

Initial results demonstrate that the character strongly influences the child’s choices. These findings provide insight into how the use of popular characters on packages and advertisements may influence children’s decisions and judgments.

Student researchers: Libby Harfmann and Alyssa Segal
Can a Female Mechanic Fix a Flat Tire?
Participants: Preschool students ages 3 - 5

In this study, we wanted to explore children’s understanding of expertise and their knowledge of gender stereotypes. Children were presented with two puppets and asked a series of questions related to the mechanic and nursing professions and also questions about domestic activities. The puppets were either a female nurse and male mechanic or a male nurse and a female mechanic.

The aim was to observe whether children’s answers would be more influenced by the puppet’s profession or gender. What we found so far is that children tend to give more weight to the puppet’s profession, regardless of gender. In other words, they do think that a female mechanic can fix a flat tire, among other things.

Interestingly, they tend to think that a female mechanic would know more about typically male activities, such as playing football, than the male nurse. In addition, children do not seem to hold strong female stereotypes regarding household activities, such as cleaning and doing the laundry. This suggests that they are exposed to relatively egalitarian environments.

A sample of Egyptian children also participated in this study, and we are currently looking at cross-cultural differences between both groups of children.

Preschoolers Trust Computers
Participants: Preschool students ages 3 - 5

Although many young children are exposed to computers in their homes and schools, very little research has been done on how preschoolers think about the information that computers can provide. In this study, we showed children short video clips of a person using two computers and we observed whether children used the information from the computers to solve a problem, like naming an object they had never seen before. We found that children as young as three years old could rely on the computer’s information to solve the problems, and that they were sensitive to whether a computer had given the user accurate or inaccurate answers in the past. We also asked preschoolers to explain why a computer provided a wrong answer, and we found that they often blamed the mistake on the person using the computer rather than the computer itself.

These results show that young children have a good understanding of the value of computers in terms of providing information, and that they are forming concepts of how computers work. This project is just the beginning of a new line of research seeking to understand how children think about computers that we hope will be of interest to preschool parents and educators.
Growing Up with the Internet
Participants: Elementary school students ages 9 - 12

Parents and educators have begun to wonder whether growing up with access to computers and the internet affects children’s attitudes and thinking skills when solving difficult problems. In this project, we are investigating whether the amount of experience children have using the internet affects how persistent they are when searching for information. Children played a “20 questions” type of game with the experimenter, where they had to identify an object based on the smallest number of clues. They also played another game where they had to find pictures hidden in a busy “Where’s Waldo” scene.

Overall, children were very good at our tasks. Contrary to our expectations, we found that children with and without a lot of experience using the internet were equally persistent when solving problems. In light of this result, we are currently planning new follow-up studies to look more closely at whether experience with internet search engines, like Google, has a more direct effect on children’s attitudes about information and their responses to challenging puzzles.

Student researchers: Celeste Roosien and James Rossi

Where Our Research has Lead Us:

The KID Lab is proud to have bright and talented student research assistants involved in all aspects of our research projects. On April 16, 2010, they had the opportunity to present findings from their studies at Michigan State University’s University Undergraduate Research and Arts Forum (UURAF). Meghan Kanya and Courtney Sharp investigated children’s understanding of the relationship between knowledge and expertise (photo 1). They even won a first place award in the category of social science. Libby Harfmann and Alyssa Segal presented findings on how familiarity with popular cartoon characters affects children’s decisions (photo 2). Celeste Roosien and Jim Rossi presented research on children’s internet experience and its relationship with task persistence (photo 3). Ashley Marderosian addressed the question of how children choose between sources of information (photo 4).

In addition, Libby Harfmann presented her findings on how the experience of parenting influences individual’s beliefs about the relative influence of nature and nurture at the 2010 Midwestern Psychological Association (MPA) conference in Chicago.

All of the presentations received positive feedback and the students found it to be a very educational experience!
What Next?

Research at the KID Lab never ends! When we finish gathering evidence for our initial research questions, we often need to conduct follow-up studies in order to gain a more complete picture of certain aspects of child development. Also, much is still unknown about children's cognition and how it changes across the lifespan. We are eager to learn more about these fascinating phenomena. Some topics we will be addressing in our upcoming research include:

- How exposure to media influences children's choices of information sources
- Children's understanding of influences on rational decision-making
- Children's reliance on familiar characters for information about tastes and preferences

A Special Thank You!

We would like to thank the following schools and organizations for allowing us to visit and conduct our research this year:

- Annie's Children's Center
- Attwood Child Development Center
- Appletree Christian Learning Center
- Excel Charter Academy
- MSU Child Development Labs in East Lansing and Haslett
- MSU Grandparent's University
- Renaissance Early Childhood Center
- Spartan Child Development Center
- St. Paul Early Childhood Center

We also extend a big thank you to the parents and children who visited our lab on the MSU campus. Our research would not be possible without your support!

Get Involved!

We are always looking for families, daycare centers, and schools that are interested in participating in our research. You can contact us by calling 517-432-8166, sending an email to msukidlab@gmail.com, or signing up on our website at http://psychology.msu.edu/kid/. If you are a parent, we will contact you as soon as we have a study available for your child’s age group.

Also, if you have moved, changed your phone number or contact information, or simply have questions or concerns, please let us know!