

COGNITIVE DEVELOPMENT NEWS

brought to you by the Cognition Learning And Development Lab at the University of Notre Dame

FALL 2011



What's new in the CLAD lab?

Meeting with students for NSF grant research

In our last newsletter we highlighted our recent grant from the National Science Foundation (NSF). Over the next five years we will be tracking the development of children's understanding of mathematics.

We just started meeting with children at a local school last month, and children seem to really enjoy the math sessions! After the holidays we will begin working with children in the lab.

We are thankful to the many parents who contacted us about enrolling their children in our study after reading our

previous newsletter. We still have space for children, so please contact us if you're interested in participating in the coming months. Children who are currently in kindergarten and second grade are eligible to participate.

As part of receiving this grant, the University of Notre Dame remodeled, expanded, and updated our lab space. We are thrilled with the results! We have new furniture, a friendly waiting area, and new rooms designed specifically for conducting math sessions with children.

Featured CLAD lab study

In our Spring newsletter we shared the exciting news of being awarded a second grant from the U.S.

Department of Education's Institute of Education Sciences (IES). Most of our newsletter readers were involved in one of the many studies we conducted under our previous IES grant.

Recall that this first IES grant allowed us to research the best methods for structuring arithmetic practice to both facilitate children's conceptual math knowledge and increase their arithmetic proficiency.

This new 3-year IES grant will allow us to expand on the findings from our previous grant by developing a supplemental math enrichment intervention for 2nd graders.

For the first year of this study we have been creating lessons, games, and activities to use in one-on-one math

enrichment sessions with local children. We began the sessions this fall in a local after-school program, and the children seem to really enjoy the sessions.

As children progress through our curriculum we are tracking their understanding of important math concepts and asking them to rate their level of enjoyment on the various activities and lessons. This information will be used to prepare our intervention for the classroom level.

Our end goal is to have a supplemental intervention that will be easy to use at home, in schools and in after-school programs. Next year we will be working with our teacher collaborator to pilot the intervention in her classroom. Finally, we'll have teachers use our finished intervention in their classrooms during the last year of this grant.



Key findings from leaders in the field

Most parents and educators would agree that parents' involvement in children's academic pursuits is important. However, determining how to be involved and exactly how that involvement affects children is not so easy, especially during the adolescent years.

Researchers at the University of Illinois examined whether the nature of parents' involvement differs in the U.S. and China. They also considered whether the effects of parents' involvement on children's adjustment is similar in the two countries.

Children in the U.S. and China reported on parenting and child adjustment factors. They rated statements such as "My parents initiate a conversation with me about how my schoolwork is going" and "How important is it to you to do well in math?" This information was collected four times between the beginning of 7th grade and the end of 8th grade.

According to children's reports, parents in China were more involved in their children's learning than parents in the U.S. However, parents in the U.S. were more highly focused on fostering children's self-motivation, and this parenting style predicted enhanced perceptions of competence and positive emotional functioning more strongly in the U.S. than in China.

Despite these differences in the nature of parents' involvement in the U.S. and

China, researchers found that parent involvement was a good thing, regardless of country. The more parents were involved at the beginning of 7th grade, the better children's engagement and achievement at the end of 8th grade.

This is an important finding because it reveals that the nature of parent involvement can vary, but increased amounts of parents' interest in their children's academics is beneficial. It is encouraging to know that being involved can help a child be more deeply engaged in learning, which, optimally, will be sustained over time.

Cheung, C. S., & Pomerantz, E. M. (2011). Parents' involvement in children's learning in the united states and china: implications for children's academic and emotional adjustment. *Child Development, 82*(3), 932-950.



CLAD team updates

Caroline Byrd, *graduate student*, joined the lab this fall. Caroline graduated from the University of North Carolina in May with a B.S. in Psychology and a minor in Mathematical Decision Sciences.

Mary McKeever and **Julia Matthews**, *research assistants*, are enjoying meeting one-on-one with local students for math enrichment sessions as part of our new IES grant. (Read more on pg. 2).

Stephanie Borjas, **Mary Wheeler**, and **Anne Smrek**, *seniors*, are busy working on their senior theses.

Serah Han, *junior*, is studying in London this semester.

Rebecca Kibler and **Andrea Renfro**, *juniors*, are looking forward to studying abroad next semester. Rebecca will be in France and Andrea will be in London.

Dana Chesney, *postdoctoral research associate*, is conducting an experiment with undergrads to determine the best method for representing math equivalence in arithmetic practice.

Lori Petersen, *graduate student*, is continuing with her dissertation research, and hopes to begin working with children at the ECDC in the spring.

Percival Matthews, *postdoctoral research associate*, is eagerly applying for faculty positions to begin next fall.

April Dunwiddie, *lab manager*, is excited to be back in the lab and working on our two new research grants after being on maternity leave.

Prof. Nicole McNeil, *director*, attended the annual REESE Principal Investigators Meeting at the Ritz-Carlton in Pentagon City for our NSF grant .

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